EUROPEAN COMMISSION
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Public Health and Risk Assessment
Health threats

Strategy for Generic Preparedness Planning

Technical guidance on generic preparedness planning for public health emergencies

Update April 2011

Introduction

Existing and future health threats are forcing countries all over the world to review, adapt and impose plans for large-scale health emergencies. Their past plans were often geared towards managing the consequences of events linked to particular diseases or other threats to health. Subsequently a lot of effort went into improving plans to face up to deliberate releases of chemical, biological, radiological and nuclear (CBRN) agents that were thought to be likely candidates for terrorist acts.

With the advent of SARS, there came the realisation of the possibility of new, previously unknown agents causing many casualties and huge economic losses. Extensive flooding and heat waves were demonstrating the impact of climate change on health. Moreover, an influenza pandemic is a permanent cause of concern for health authorities all over the world, and the recent pandemic (H1N1) has shown the importance of a co-ordinated approach and well defined and thoroughly developed structures for the success of any control measures taken. The implications for organising safeguards and preparing for this vast array of threats are enormous. It was soon realised that the same personnel and assets would have to be mobilised and deal with the various emergencies. The need became clear for an overall health emergency preparedness plan with as many streamlined and harmonised components as possible, to cope with various kinds of emergencies such as CBRN events, environmental threats, and other events that could threaten health.

Recognising these challenges, the Council meetings of 6 May 2003 and 2 June 2003 requested the Commission to consider 'developing a general preparedness plan on communicable diseases and health threats'.

In 2005 there was a Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on strengthening coordination on generic preparedness planning for public health emergencies at EU level. Linked to this communication was a technical guidance document entitled 'Strategy towards Generic Preparedness Planning'. This document focussed particularly on contagious diseases.

Besides communicable diseases and biological threats there is a large spectrum of other threats. Chemical threats are increasingly regarded as a serious public health threat. A host of chemical agents are produced in the industrial sector every day and are transported and stored in significant quantities in communities around Europe, and worldwide. At the same time public health professionals are in general poorly prepared to handle chemical emergencies, as most national public health institutions in the EU Member States have concentrated on communicable disease control. The same applies to radio-nuclear emergencies and other areas like health aspects of climate change.

In other areas of concern new developments have been considered. One example is the European Commission policy package on chemical, biological, radiological and nuclear (CBRN) security within an EU

Action Plan on Countering CBRN Threats. Other examples are the Community Civil Protection Mechanism and the Civil Protection Financial Instrument.

The document from 2005 has now been revised taking into consideration new developments and experiences. It is focussed on generic aspects and, at the end of a few chapters there are sections on biological, chemical, radio-nuclear and climate change aspects.

This document is intended for use both for planning at EU level and at the national levels in the different member states. The document is prepared by the European Commission in consultation with the Member States through the Health Security Committee and its Sections, especially the Generic Preparedness Planning (GPP) Section.

The scope and objectives of generic preparedness planning

Most Member States have 'emergency' or 'contingency' or 'crisis' management plans (including business continuity plans), which can be of general applicability or address specific situations or threats, such as natural disasters, industrial and transportation accidents, major fires or other man-made deliberate or non-deliberate events. A generic emergency management plan comprises a range of activities to protect communities, property and the environment, and is usually based on a 'comprehensive' approach, an 'all hazards' approach, a 'multi-sectoral and inter-sectoral' (or 'all agencies' or 'integrated') approach that encompasses all elements that are relevant in ensuring that Member States have a 'prepared community'. Preparedness planning for health emergencies forms an essential and major component of such generic emergency management plans.

Planning may help to reduce the burden associated with the health threat in terms of mortality and morbidity, hospitalisations and demand for health care goods and services, maintain essential services, protect vulnerable groups, minimise economic and social disturbance and enable a quick return to normal conditions. Member States have, to various degrees, developed capacities for forward planning and reacting to health threats that require a rapid response.

Generic preparedness planning at EU level deals with threats and emergencies of EU concern, that is with events, incidents, situations and circumstances which threaten or are likely to threaten public health in more than one Member State. It also deals with situations where cross-border cooperation and coordination are essential.

The overall goal of EU action in generic public health preparedness planning is to assist Member States in developing their plans and factoring into them the EU dimension with its body of laws in various sectors that impinge on emergency plans. The strategy developed in this document should provide the backbone for developing core elements to address generically different types of health threat, whether anticipated (such as pandemic influenza, toxic or microbiological food contamination, release of hazardous materials) or unexpected (e.g. a SARS-type epidemic). They may be associated with biological, chemical, physical or radio-nuclear agents, or linked to deliberate, accidental or natural events or acts. The strategy should lead to the establishment and improvement of the interoperability of national plans, mainly by creating coordination mechanisms and analysis and communication tools that enhance cooperation between key Member State and Commission players.
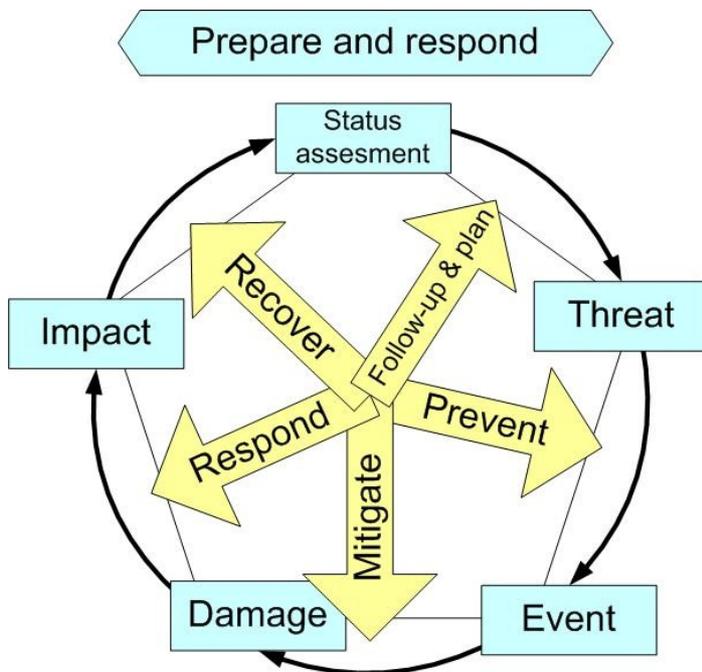
The focus of action under this strategy is on conducting comparisons, drawing up checklists (goals to reach), providing a mechanism for undertaking reviews, validations and tests and making recommendations for improvements and fine-tuning of national plans and EU procedures to reduce vulnerabilities and incompatibilities. These actions could lead to measures and recommendations at national level and a coordination / communication system EU-wide with agreed procedures and mechanisms. In this connection, the role of each player (European Commission and Member States) needs to be stated in advance. Within European Commission the relevant agencies should be taken into consideration such as ECDC, ECHA, EFSA, EMEA and EUROPOL (becoming an agency from early 2010).

The objectives of generic preparedness plans at EU level are to:

Highlight the minimum public health attention items each Member State plan should consider.

Identify the attention points for the European Commission and Agencies, organisation and procedures in support of the Member States' plans.

Encourage mutual awareness, comparisons and follow-up of the Member States' plans.

Provide a blueprint for developing core elements on the different types of health threat and checklists of good preparedness practice.

Identify the EU dimension with its body of laws in various sectors that impinge on emergency plans and make the interoperability of national plans possible.

Clarify the needs and objectives of planning and coordinating public health approaches in health emergencies: human health emergencies are primarily dominated by events related to diseases transmitted to humans from other humans, food or other products or plants or animals, or may be caused by biological, chemical, physical or radio-nuclear agents directly or may be caused by natural disasters. This planning will also have to take into account and refer to existing scientific mechanisms and international, national and European legislation for food, product, plant and animal health as well as those concerning releases of agents to the environment.

Clarify and explain the need for inter-sectoral collaboration; suggest best practices to help the Member States to develop their plans with an all hazard approach.

Define appropriate action at EU level in response to all types of major health emergencies with international effects.

The methods and tools of generic preparedness planning at EU level

Experience has shown that the ability to respond to an 'international threat' to health is profoundly influenced by the extent to which the issues have been considered in advance and plans are in place for coordinated action. This document addresses the planning required in order that the European Community is prepared to detect and respond effectively to a health threat. Existence of regularly updated national preparedness plans in the Member States is a pre-requisite for responding adequately to threats at European Community level.

A preparedness plan would comprise components that address fundamental issues in organising resources to act in a coordinated, effective and cost-efficient manner to deal with an emergency. For each key issue, there would be a series of attention points that have to be examined carefully in advance and appropriate arrangements made to deliver the intended response. To this end, it would be extremely useful to draw up and use a preparedness checklist outlining the essential minimum aspects of preparedness for Member States, Commission and Community Agencies involved in the protection of health. Such a checklist is not intended as a substitute for preparedness plans, but rather to serve as a guide when developing, revising or assessing the comprehensiveness of preparedness plans.

For each key topic of preparedness planning, there are four concerns that have to be addressed:

- the 'Outcome expected', which is what the plan should have achieved, once all elements have come into place;

- the respective roles of the Member States, European Commission and Agencies in this outcome: who should do what in which response activity;

- the degree of interdependence and added value of cooperation and EU or international binding commitments, including for example good contact lists and guides;

- defined procedures to contact the responsible authorities in the Member States.

The framework for cooperation in generic preparedness planning contains three main activities:

- first, sharing national plans and making comparisons, evaluations and improvements on the basis of the key issues and checklists outlined ;

- second, identifying the contribution and role of Community legislation and arrangements so that plans take full account of them, and examining the need for further measures;

- third, making appropriate arrangements and flowcharts for the sequence of events and actions so that the plans and responses are interoperable and compatible.

Preparedness planning is not a quick process: it would be unrealistic to consider that it is possible to have a detailed, comprehensive and reliable generic health emergency plan in weeks, or even months. Two of the reasons these plans take time is that there is a need for a multi-sectoral approach, with the public health players present or their role precisely defined in each policy, legislation or plan. Finally, to ensure adequate participation with the implementation of these plans, all levels of administration and civic society down to the community level have to be involved.

The multi-sectoral approach means involvement of many levels of government and people with different areas of skill, including policy development, legislative review and drafting, food, animal and plant health, human population health, patient care, laboratory diagnosis, laboratory test development, communication expertise and disaster management. Community involvement means that one is making optimal use of knowledge, expertise, resources and networks at the local level. It is the only way to boost support for policy decisions.

Generic preparedness planning at EU level may assist the development of national plans by suggesting the key issues in emergency and response for national plans and identifying the EU dimension for each player. In parallel, the EU elements in such plans and the existing EC legislation (in all relevant fields, such as coordination and consultation provisions on health, food safety, veterinary legislation etc.) indicate what needs to be done at EU level in the event of a major health emergency. It is also essential to take into account international legislation such as the International Health Regulations (WHO 2005).

This document focusses on public health and addresses the key issues in generic preparedness planning, namely: information management, communication, scientific/evidence-based advice, health crisis management structures, health sector preparedness, inter-sectoral collaboration and management of plans. Each of these key issues is presented as a separate chapter. In each chapter, the key public health tasks are

explained in more detail, bearing in mind that depending on the Member State, they may be the responsibility of different departments.
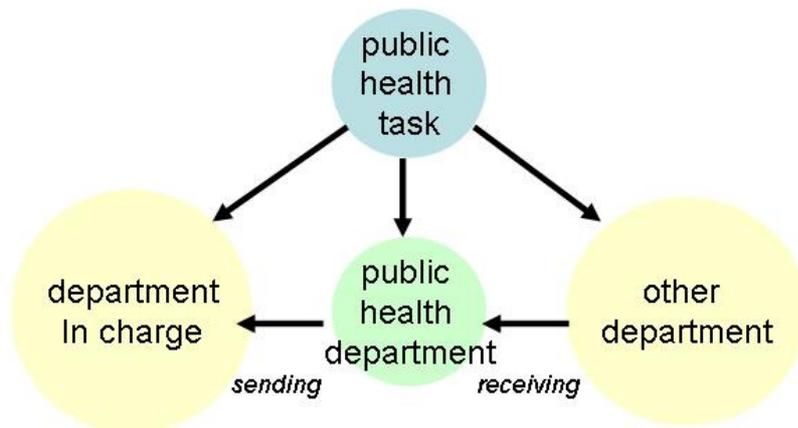
Guidance is given in the chapters that follow on principles and choices of tools and processes in each area and where appropriate on legal framework. In each chapter, where appropriate, sections are added on specific considerations for biological, chemical, radio-nuclear and climate change events. In Annex 4 examples of relevant legal framework is listed.

The management of health threats is done in several steps: identifying the threat, treating those affected, limiting the spread of the disease / eradicating the threat.

Research is needed to evaluate the tools available to handle these steps and in many cases to devise new tools. These tools are often not developed in ordinary research programs or at least need to be adapted to the specific requirements of managing health threats. Special procedures are developed to identify the specific requirements, to find usable applications and to adapt them to health threat management.

Some of this research can be done in the preparatory phase, but due to the very special and unforeseeable nature of new threats, much research needs to be done during and after an emergency. Plans allow for this development and include rapid access to financial resources. A special area of interest here is medicinal product development. However, research arrangements are not addressed specifically in this technical guidance document.

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1 Information Management

Information management is the gathering, handling, use and dissemination of information related to an emergency: pre- and post-event surveillance, risk analysis, clinical, laboratory and environmental analysis of samples, monitoring side-effects and archiving. All the relevant information should converge in a single setting.

1.1 Pre-event surveillance

Outcome expected

For early identification of potential public health problems or emergencies of international concern that may lead to a major public crisis, it is essential to have pre-event surveillance tools and mechanisms to decide whether the event deserves the full attention of all actors. These revolve around collection, collation, analysis and interpretation of data and dissemination to those who need the information for action.

The Commission provides an exchange platform for methods and tools and the Member States decide on implementation. Public health has the lead role in early identification of potential public health events or emergencies of international concern that may lead to a major public crisis. It must also be recognised that the first indications of an upcoming event may come from outside the public health sector: from the media or from other sectors such as civil protection, food and animal, law enforcement and security services and others. An extensive network for screening, verifying and sharing of information is needed (including a mechanism for sharing confidential information).

Communicable diseases and biological threats are recognized threats but a large spectrum of threats are increasingly regarded as a serious public health threat. A host of chemical and radio-nuclear agents are produced in the industrial sector every day and are transported and stored in significant quantities in communities around Europe. At the same time public health professionals are in general poorly prepared to handle chemical and radio-nuclear emergencies, as most national public health institutions in the EU Member States have concentrated on communicable disease control. Other sources of major disasters that also should be taken into consideration are those linked to environmental events (floods, avalanches, mud slides, earth quakes), major explosions, major transport accidents and major fires (with a great number of victims with burns).

See also 2.1 Systems and procedures

MS, Commission and Agencies

Checklist on pre-event surveillance for incidents with public health consequences:
- [ ] Are the following minimum requirements fulfilled?
  - System for early recognition by clinicians and health care institutions;
  - Detection and verification of threats to public health;
  - Collation, survey, analysis, evaluation, screening of media and other sources of information, and reporting of epidemic intelligence and disease surveillance data, with detection capability for 'suspicious' events;
  - System for 'rumour checking' to assess and verify events potentially constituting public health threats;
  - Access to high-quality laboratory facilities to confirm or exclude a diagnosis (e.g. of biological, chemical and radio-nuclear agents);
  - Guidelines for investigation and case reporting, investigation and appropriate follow-up (which may be lengthy), including criteria for both situations recognised as potential terror agents and others;
  - Access to expertise for collation and interpretation of reports, and initiation of further investigations;
  - Liaison between and with the national public health structures to ensure that reports trigger appropriate and timely responses and system for timely reporting to the proper authorities
- [ ] Who are the competent authorities / structures and is the availability of the authorities known?
- [ ] Are public health issues integrated in the handling of an incident? Basis of integration? Flow chart?
- [ ] Are operational links available and used with authorities and structures competent for epidemiological surveillance?
- [ ] Are operational links available and used with civil protection services?
- [ ] Are operational links available and used with animal / plant / food authorities and services?
- [ ] Are operational links available and used with authorities and structures for chemical / radio-nuclear incident management?
- [ ] Are operational links available and used with WHO and other international public health organisations?
- [ ] Are operational links required with law enforcement structures and authorities? As of when will intervention be mandatory?

Intra-Community exchange of information requiring:

- [ ] Operational links with EU and the Decision 2119/98 authorities and structures competent for epidemiological surveillance (as defined by Article 1 of the Decision)
- [ ] Operational links with WHO (including IHR NFP) and other appropriate international organisations.
- [ ] Operational links with EU mechanisms on animal health, plant, food, civil protection, radiological issues, law enforcement, EUROPOL.
- [ ] Operational links with EU Agencies (e.g. ECDC, ECHA, EFSA) (epidemic intelligence and risk assessment)

1.2 Risk assessment using pre-event surveillance data from medical intelligence, surveillance and other information sources

Outcome expected

To be able to develop a common approach to perceived health threats, information from different sources (medical intelligence, surveillance, multi-sectoral exchange) and the respective stakeholders is connected at EU level, and complemented with existing technical resources and expertise available at EU level by using a common tool developed for this purpose.

Tools are available to assess and verify unconfirmed rumours of outbreaks / public health threats.

An electronic 'Medical Intelligence Tool' can be used to examine several times a day a list of articles of interest, selected on the basis of keywords, in several languages, and of worldwide scope. Appropriate keywords should be selected to cover all types of health threats such as communicable diseases, chemical, radio-nuclear and climate change threats. This electronic Web monitoring tool will also incorporate analytical features and an instrument for rapid identification of disease outbreaks, public health crises and possible health threats.

An enhanced analysis of existing surveillance data through existing surveillance schemes (Dedicated Surveillance Networking) identifies temporal and geographical changes for example in the epidemic level of known diseases with epidemic / pandemic potential. Ongoing systematic collection, collation, analysis and interpretation of data will result in improved standardisation, timeliness and completeness of reported data. The system will provide detailed descriptions of clusters of cases by time, place and persons affected.

Currently no surveillance system exists for the detection of chemical or radio-nuclear exposures, although European research projects are for example exploring the possibility of using the data of the Poison Centres around Europe to identify clusters in chemical events, and exploring early detection of threats by syndromic surveillance systems.

In all types of event (i.e. biological, chemical, radio-nuclear or natural (climate change)) it is essential to clearly identify the appropriate agency/authority in each Member State that is responsible for the health effects on humans, and which will need to respond accordingly. Experts in for example environmental epidemiology and toxicology are in general in short supply worldwide and they are usually found in the academic or research area. A common network of experts at EU level will be developed to enhance and facilitate cross-border collaboration and exchange of expertise.

Each event detected will be evaluated for its threat potential according to the same criteria and commonly EU pre-defined categories.

Each step of the evaluation leads to a simple score, which all staff on duty should be able to calculate. This evaluation process leads to a threat assessment and if necessary triggers a response mechanism.

To what extent such a system will be implemented in each Member State will depend on resources available and the perceived necessity. Connecting all resources in this area in the EU and supplementing them with resources at EU level would provide a powerful instrument for risk analysis. This would be a fundamental resource in developing common approaches to the threat posed by international events to the EU Member States.

MS, Commission and Agencies

Checklist on risk analysis using pre-event surveillance data from medical intelligence, surveillance and other information sources: are the following minimum requirements in place?

- [ ] Contact with agencies in charge of intelligence analysis (daily/routine)
- [ ] Threat assessment principles EU-wide agreed for all types of health threats (biological, chemical, radio-nuclear, technical, natural)
- [ ] An inventory of resources for risk analysis and a structure to coordinate their activities
- [ ] Resources for timely national risk analysis
- [ ] Identification of appropriate contact points in each Member State and international organisation for the different types of health threat
- [ ] Collaboration with other national and international partners for exchange of necessary information and analysis

Interoperability

Intra-Community activity leading to:
- [ ] Establishment of procedures (contact network and declaration process) for collaboration with a wide range of actors in the risk analysis field, to cover all types of health threat
- [ ] Threat assessment principles are agreed and best practice is shared
- [ ] The Commission and technical expertise in the EU Agencies (e.g. ECDC, ECHA, EFSA) develop the necessary tools.
- [ ] EU Agencies (e.g. ECDC) develop structures for risk analysis at EU level and develop capacities to strengthen national systems when requested.
- [ ] Operational links with WHO (including IHR NFP) and other appropriate international organisations.
- [ ] Operational links with non-EU agencies and other international initiatives (e.g. GHSAG)

1.3 Post-event surveillance

Outcome expected

Once an event is identified, epidemic intelligence and surveillance activities will have to become more focussed and adapt its priorities to the nature of the threat identified, and the needs evolving (e.g. detection of cases, monitoring of spread, severity, risk groups, etc).

Public health systems (institutes and professionals in general) should be able to handle surveillance for all types of agent and event. Adequate surveillance systems should be established, usually on an ad hoc basis, taking into account the characteristics of the affected populations. Public health systems may have to rely on and communicate with multiple sources to obtain information on cases (different laboratories, forensic medicine, pathology departments etc.). In addition at EU level more players may be involved in the event, such as civil protection, EU agencies etc.

Information flow, integration of lab reporting and specific surveillance activities will be established. Data will be collated in one location and presented in a way that can easily be understood by the general public and the policy decision-makers.

At this stage the Member States will coordinate closely at EU level with defined procedures for information exchange, coordination of countermeasures, evaluation of pooled data and others. Common standards for surveillance in different areas (human, veterinary etc.) will be established, including case definitions. The European Commission and ECDC will be the coordinating body for activities related to public health at multi-state level, and will be supporting Member States in cross-border activities related to threat assessment and control. Other agencies, depending on the nature of the threat and the implemented measures, will be involved (e.g. EMEA for drugs and vaccination, EFSA for food safety).

MS, Commission and Agencies

Checklist on post-event surveillance: are the following minimum requirements in place?
- [ ] Established links with surveillance in other-than-human areas (animal, environment, poison centres etc).
- [ ] For CBRN events, contacts with agency and military allowing fast and adequate dispersal assessment
- [ ] Procedures for a quick start of active surveillance and establishment of the criteria needed
- [ ] Procedures allowing quick changes of the surveillance (adaptation to the situation)
- [ ] Clinical surveillance of human cases including age-specific morbidity and mortality, and rates of hospitalisation taking account of biological, chemical, radio-nuclear and other agents
- [ ] Epidemiological surveillance including field investigation capacity and contact-tracing
- [ ] The impact of prevention programmes e.g. vaccination (including adverse effects) or other prevention programmes is assessed regularly
- [ ] Flexibility to change from special reporting to normal (changes of surveillance / reporting over time)

Intra-Community activity leading to:
- ☐ Establishment of procedures for collaboration with a wide selection of actors in the CBRN fields
  - ❏ Procedures for dispersal assessment are shared
- ☐ An EU post-event surveillance programme should involve WHO and the relevant agencies (e.g. ECDC and ECHA) with competent bodies for threat detection, requiring systems for:
  - ❏ quick establishment of EU-wide surveillance activities preferably in a common format
  - ❏ evaluation screening and verification of information
  - ❏ collation, survey, analysis, evaluation and reporting of medical intelligence and disease surveillance data
  - ❏ ensuring collaboration at an EU level with support to individual Member States
  - ❏ responding to established procedures and relying on necessary equipment for limiting harm and treating victims
- ☐ EU Agencies (e.g. ECDC) issue threat assessment and develop an activation mechanism, communication lines and logistics.
- ☐ Operational links with WHO (including IHR NFP) and other appropriate international organisations.
- ☐ Operational links with non-EU agencies and other international initiatives (e.g. GHSAG)

1.4 Clinical and laboratory diagnosis

Outcome expected

It is essential with every public health threat to rapidly identify and confirm the agent involved. Every plan should address the identification of unknown agents, confirmation of known agents, and provision of surge capacity for a Member State facing a laboratory burden.

In the laboratory domain the plans should meet the above needs for both clinical and environmental sampling, with a coordination mechanism linking the actors if more than one is involved. In the following, these dual activities (analysing clinical and environmental samples) should always be borne in mind.

For laboratory work, a structure should include procedures for laboratory reporting, confirmation of results (second lab, second country) and quality assurance. On the clinical side, clinicians should be able to identify the syndrome and a system should supply them quickly with the adequate guidelines.

For unknown agents, an international system has proved essential for rapid agreement on laboratory procedures and collating clinical data. For known agents of high threat potential, a secondary confirmation at an international level would improve trust in the diagnosis made. If there is a massive surge of samples in a single country, it will be essential to offer support by networking national and international laboratories. These networks also must, of necessity, have common quality assurance schemes.

Laboratory support will be available at Member State level, and for issues beyond national capacity or when national capacity is not available, cooperation between labs within the Community can be organised to optimise the use of pooled EU resources.

MS, Commission and Agencies

Checklist on clinical and laboratory diagnosis: are the following minimum requirements in place?
- ☐ Network, exchange between labs (who is doing what)
- ☐ What are the resources available?
- ☐ Established structures to communicate with laboratories and clinicians and ensure that laboratories report diagnosed cases to their authorities.
- ☐ Procedures for rapid identification of unknown pathogens/agents during an event in clinical and environmental samples
  - ❏ Clinical syndrome description: agreement on further analyses and investigations such as the search for pathogens and antibodies in body fluids (e.g. blood, serum, plasma, liquor, stool, lavage fluids, material from biopsies, or urine).
  - ❏ Member States must ensure that hazardous agents will be handled in a lab with an adequate safety level (i.e. bio-safety level to be agreed and be the same in all Member States).
- ☐ Procedures for rapid confirmation of known harmful agents during an event in clinical and environmental samples
  - ❏ Member States identify and appoint reference laboratory(ies) for this harmful agent. For high threat and very high threat agents, patient material or the isolated agent is sent to the reference laboratory, in order to determine the genotype and to establish proper storage of the viable isolated strain (strain collection).

- ❏ The transportation of harmful material should follow agreed procedures taking UN and IATA regulations into consideration.
- ☐ Member States have established procedures for addressing surge capacity and requirements to face a major increase in demand given that local and even national laboratory capacities may be overwhelmed by patient samples.
- ☐ Possibility during an event to quickly establish and distribute guidelines among laboratories and clinicians for diagnosis of cases and isolation of pathogens. .
- ☐ International agreement for agents where national capacity is inadequate and for the secondary confirmation of high-threat pathogens and other environmental agents.

Interoperability

Intra-Community activity leading to:
- ☐ An EU programme in EU Agencies (e.g. ECDC) with national competent bodies that provides a structure for the rapid establishment of EU common procedures for diagnosis and confirmation of diseases and isolation of agents during an event
  - ❏ Sample taking (and transport) procedures: depending on the syndrome observed, clinical and laboratory experts to advise on sampling issues
  - ❏ The *bio-safety* level ought to be agreed and be the same for all Member States
  - ❏ Reference laboratories for hazardous agents listed, and established links with WHO
  - ❏ Confirmation issues: in the event of a positive laboratory diagnosis of a very high-threat pathogen and where deliberate release cannot be excluded, confirmation of the positive laboratory result is sensitive. It should be done in an independent procedure, agreed upon at Community level.
  - ❏ The Commission assists in setting up bilateral and multilateral agreements to assure state-of-the-art confirmation of results and provides information and communication platforms.
- ☐ Procedures to establish agreement on various aspects of laboratory assistance for a variety of high-threat agents.
- ☐ For biological agents including infectious diseases ECDC is developing an activation mechanism, communication lines and logistics, and support to the Commission in setting up bi- and multilateral agreements if so desired by Member States, developing and supporting training and surge capacity for laboratory burden
- ☐ Organised platforms for information collection and exchange
- ☐ An EU programme providing a structure for rapid establishment of EU-wide procedures for quality assurance to assure high sensitivity and specificity of these diagnostic devices, which are usually not commercially available
- ☐ An EU programme that provides a structure for rapid creation of investigation teams, in the case of requests for on-site support, to assure epidemiological support for collection, collation and analysis of data during an event.

1.5 Environmental sampling

Outcome expected

National plans and procedures to obtain environmental samples will be in place in each Member State. These plans will include protection measures for the public and the investigating personnel, definition of actors and roles, a list of the necessary minimum equipment and protocols for sending and analysing environmental samples in laboratories.

A Working Group set up by the Commission will develop recommendations for the Member States to harmonise the procedures and protocols for environmental sampling. Environmental samples collected for the purpose of determining hazardous agents should be suitably packaged, labelled, marked, and shipped according to applicable national and international regulations.

MS, Commission and Agencies

Checklist on environmental sampling: are the following minimum requirements in place?
- ☐ Sampling strategy
  - ❏ goal of sampling strategy is defined as regards purpose, sampling method and number of samples
  - ❏ access to relevant information regarding buildings, technical and managerial structures (e.g. fans, filters, ductwork, air-conditioning systems, etc.)
  - ❏ define risk limits
  - ❏ define geographical dispersion areas and moving objects in the area to be sampled
  - ❏ define percentage of negative controls (field blanks) in the total number of samples and how to obtain them.
- ☐ Bulk sampling: bulk samples can help investigators characterise the presence of contamination on building materials such as carpeting, dust cakes on air filters, settled dust (e.g. rafter dusts) and office equipment. However, because extracting for example spores from bulk samples can create exposure problems for laboratory personnel, appropriate precautions (such as double-bagging of samples) should be taken to prevent secondary spreading of spores from contaminated bulk samples.

- ❒ Define detection limits
- ❒ Define procedures to obtain bulk samples
- ☐ Surface sampling with wipes or swabs (surface samples are collected by wiping or swabbing a moistened, absorptive medium across a non-porous surface)
  - ❒ Define media to be compatible with the laboratory's analytical procedures
- ☐ Surface samples collected by High-Efficiency Particulate Air (HEPA) vacuuming (collecting samples by vacuuming offers the advantages of covering large or dusty, non-porous surfaces and porous surfaces such as carpeting, ceiling tiles, ventilation system filters and cloth seats)
  - ❒ Define methods for different surfaces and materials
- ☐ Air Samples
  - ❒ Define procedures for collection of different contaminants

Interoperability

Intra-Community activity leading to: common standards on appropriate sampling and subsequent decontamination and transport procedures agreed between public health authorities and/ or other competent authorities.

1.6 Monitoring side effects of action to counter the health threat

Outcome expected

A legal framework and procedures will allow real-time data collection.

Measures taken to counter the health threat will cover different areas, possibly including containment strategies, contact tracing, isolation of cases, decontamination, as well as medical treatment, and vaccination. Depending on the nature of the different measures, possible negative effects and adverse events need to be carefully and timely monitored and evaluated both at national and at European level.

Depending on the state of alert and the medicinal products, devices and other medical products used to counter the health threat, the institutions able to provide adverse event information may differ in a number of Member States.

A system to monitor side effects will be put in place, with a shared database (input) and aggregated data for output, definitions (case definitions, selection criteria, inoculation procedures, vaccines, list of contra-indications), identified variables and contact points, recommendations on potential treatment. It is of special concern that the monitoring of side effects of orphan drugs used outside their licensure, e.g. as antidotes, should be covered in the national legislation and in other relevant systems such as the pharmacovigilance mechanism.

MS, Commission and Agencies

Checklist on adverse event monitoring: are the following minimum requirements in place?
- ☐ National plans include the setting up or extension of systems to provide adverse event monitoring

Interoperability

- ☐ EU adverse event monitoring in ECDC (except for pharmacological adverse events, which should be covered by EMEA), with national competent bodies, is put in place in collaboration with the Member States' competent authorities for biological agents including infectious diseases

1.7 Filing, documentation and archiving management

Outcome expected

In the course of any health crisis (such as an outbreak, mass human exposure etc.), information will evolve very fast and keeping track of responses can become a major problem. Fact-finding committees could be established after recovery, requiring proper record-keeping practices during the event. Plans should describe the arrangements for ensuring that relevant information (including sources) is recorded and retained for use in evaluations after the emergency, and for long-term health monitoring and follow-up of emergency workers and members of the public who may be affected.

MS, Commission and Agencies

Checklist on filing, documentation and archiving management: are the following minimum requirements in place?

- ☐ Daily and systematic recording of incoming data and response
- ☐ Local, national, and interregional coordination is described

Interoperability

- ☐ Coordination contacts are known at the national and EU-level
- ☐ After an event, an active evaluation of the event is carried out
- ☐ Community coordination of existing filing systems is set up and defines the role of each Agency

2   Communication

The distribution of accurate and timely information at all levels is critical in order to minimise unwanted and unforeseen social disruption and economic consequences and to maximise the effective outcome of the response. Information management as described in the previous chapter can only be achieved if the distribution of information is accurate and timely regarding the following communication tasks and systems: reporting system and procedures, rules on information transmission and consultation, data communication, operational communication and management between players, and risk/crisis communication to the media and the public.

Effective communication is an essential element of emergency management. As well as empowering the public to adopt protective behaviour, pro-active communication can facilitate case reporting and awareness among frontline responders, reduce confusion and allow for best use of resources. All of these are necessary for an effective response. Good communication also helps maintain the public's trust in the health authorities during an event, minimising the potential for social and economic disruption.

When communicating with the media and public, the principles of good risk communication have to be applied.

2.1 Reporting systems and procedures

Outcome expected

Who reports what to whom, along which hierarchical lines? Clear flow of data input, flow of information and data transfer, and responsibilities of each to collect, analyse and report the surveillance and/or control data. SOPs (Standard Operating Procedures), software and agreements are likely outcomes.

A coordination mechanism including communication is a key element for a general preparedness plan.

Such a tool ought to integrate elements for detecting unusual events and health threats based on:

open information sources (access to MedISys and other similar information sources) transmitting alerts and early warnings (EWRS, RAS BICHAT, RAS CHEM, RASFF, RAPEX and others relevant to the health crisis such as IHR)

a common web-based platform for crisis management (HEDIS) where health authorities will find situation and activity reports, situation maps and any pertinent information likely to help in decision making.

Such tools must be available on a 24/7/365 basis.

MS, Commission and Agencies

Depending on the gravity, three systems must be considered:
- [ ] rapid alert and notification systems
- [ ] early warning systems
- [ ] crisis management supporting systems

In all cases, the systems must be reliable, flexible, secured and available on a 24/7/365 basis. This implies following principles:
- [ ] Identification of the authorities / structures / services for reporting. Inclusion of public health component in the other systems and vice versa;
- [ ] Standard Operating Procedures, including relevant algorithms, must be developed at an early stage and they must be implemented and respected by all the parties involved, with outlines for passing alerts and warning messages from local to national government and beyond (e.g. EU and WHO level);
- [ ] Criteria for notification have to be agreed between parties;
- [ ] A stand-by duty officer system can be implemented;
- [ ] A bi-directional (dual) communication channel is a requisite (this would avoid any loss of information) and must involve competent authorities and 24/7/365 operational contact points;
  - ❒ Role of each: the competent authority is a high-ranking official in a Ministry or Institute with the power to take and implement decisions; the 24/7/365 operational contact point, forwards all alerts to the competent authority

❐ Apply the same principle to the specialised Commission services acting as competent authority, and the Security Directorate based in Brussels as the 24/7/365 contact point.

☐ The use of the most advanced communication technologies combining rapidity of exchanges and confidentiality for the data (see Annex 1);

☐ Back-up facilities must be available;

☐ Intervention times should be set depending on the target and scope of the network involved;

☐ Facilities for transmitting very sensitive information must be considered when developing the system. This refers to the various types of information such as unclassified information about events (sensitive information) or classified information (such as RESTREINT UE, CONFIDENTIEL UE, SECRET UE or classified information under national law);

☐ All systems must provide confidentiality, integrity, accountability, availability, sustainability and reliability in communication protocols (certainty that the messages arrive);

☐ Adapted notification forms have to be set up, taking into account the complexity of the response needed.

Interoperability

Intra-Community reporting and procedures should:

☐ Communicate the designated competent authority and 24/7/365 contact point to the Community Alert and Early Warning mechanisms.

☐ Notify the Member States of the contact points responsible for the warning systems in place and the Security Directorate (and/or the central entry point) in Brussels as the 24/7/365 contact point.

☐ Consider involvement of specialised networks on Food, Feed, Phytosanitary, Animal health, Civil Protection, Chemical and Radiological surveillance and response bodies, law enforcement networks, and other specialised networks, etc.

❐ Such networks already exist and link the Commission and the relevant Ministries in Member States, as well as international organisations involved in health protection (WHO[1], Council of Europe, OECD, IAEA, OPCW, FAO, OIE, GHSI[2] etc).

2.2 Obligation for information transmission and prior consultation / information on countermeasures

Outcome expected

An EU structured framework will exist to report immediately and to consult on health threats, events and countermeasures of EU and international relevance.

Communication on health threats (alerting) between authorities/structures in public health will occur in a very timely way, directed to the proper authorities so that they can activate preparedness plans. A particular consideration should be given to the role and profile of the 'IHR mechanisms'.

Member States will immediately report the event and countermeasures, in liaison with the Commission, to the other Member States in order for them and for the EU to take timely adequate countermeasures (e.g. in the case of communicable diseases), to contain spread to other countries. Member States adopt countermeasures, but if for example these measures affect travellers, the other Member States ought to be advised in advance.

The competent Commission services will receive notification of the countermeasures to be taken and ensure the follow-up with stakeholders in the Member States and other Commission services and their specialised structures. An EU procedure for prior information and consultation will comply with the Community Institutions' legal mandate and limitations in public health (human health) as well as animal and plant health. The legal framework is important, as countermeasures may damage the functioning of the Community internal market. Guidelines on levels and scales of threat and common methods and terminology will be agreed.

MS, Commission and Agencies

☐ Agreement on and implementation of:

❐ Guidelines on levels and scales of threat and common methods and terminology.

❐ A list of (mandatory notifiable / to be communicated) countermeasures.

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[1] A particular consideration should be given to the role and profile of the 'IHR focal points' which have been identified by all Member States as the national contact point pursuant the International Health Regulations (2005) (IHR).

[2] GHSI: Global Health Security Initiative.

- ❐ A procedure on communication and consultation of countermeasures (relevant work in progress: Commission Decisions on Stand-by Declaration and Countermeasures)
- ❐ Algorithms for each situation, if possible
- ☐ Procedures to exchange info and cooperate between animal health, food product, plant and human health protection services.
  - ❐ Is human health systematically considered in the relevant procedures?

Interoperability

Intra-Community transmission and consultation requires:
- ☐ Setting up of legal framework with two Commission Decisions (Proposals for a Commission Decision setting up a consultation and information procedure and cooperation, and for a Commission Decision on a procedure declaring rapidly a Community alert, requiring extraordinary and temporary concerted actions at Community level under the Community Network for epidemiological surveillance and checking of CD).
- ☐ Setting up arrangements with the competent Commission services to allow decisions on countermeasures that may affect trade, economy, social life etc (ARGUS and Crisis Coordination Committee (CCC)).
- ☐ The competent Commission services receive notification of the countermeasures to be taken and ensure follow-up with their stakeholders in Member States and other relevant Commission services.
- ☐ Inclusion of WHO and revised IHR, when appropriate.

2.3 Data communication and management

Outcome expected

Clear flow of data input, flow of information and data transfer, and responsibilities of each to collect, analyse and report the surveillance and/or control data from the first notification to the health crisis management structures (see Chapter 4). SOPs, software and agreements are likely outcomes. If required, security must be designed into the core of the system, along multiple lines. Its goal is to prevent, contain, and recover from network attacks. Risk analysis must be launched.

The partners at local, national, EU and international levels will be identified and share the relevant information and data.

Rapidity in detection, but even more the prompt sharing of alerts/information, is essential. In addition to the communication tool and procedures one must ensure the integrity of the information exchanged, validate the content, authenticate the sender, and verify reception of the messages sent. Pre-established notification forms may improve the rapidity of transmission and the clarity of the information shared. The mechanism should integrate a searchable archiving function, as well as giving the Commission a role as moderator.

MS, Commission and Agencies

Minimum requirements to be met by communication tools and procedures linking services in Member States, Commission and Agencies:
- ☐ Pre-established notification forms (to transmit clear messages rapidly)
- ☐ Establishment of secure communication channels for sensitive or classified information.
- ☐ Authentication of the sender
- ☐ Validation of the content
- ☐ Verification of reception of messages sent
- ☐ Security measures to ensure availability of services and data, integrity of data, authentication of nodes and security maintenance
- ☐ Are these requirements met in the services dealing with the four kinds of threat (biological, radiological, nuclear, chemical)

Interoperability

Data communication and management of public health threats would require intra-Community at least to:
- ☐ Maintain a platform (HEDIS[3]) to establish and regularly update :
  - ❐ Standards for collected epidemiological data and results (currently in development in TESSy and EPIS at ECDC),
  - ❐ sSecure communication channels for sensitive information

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[3] HEDIS= Health Emergency and Disease Information System.

- ❐ Standards in electronic reporting of collected lab data and results,
- ❐ Standards in routing and security of data,
- ❐ Development of common metadata descriptions,
- ❐ Integration of information from multiple data sources, preserving linkages between entities, objects and events,
- ❐ Presentation of structured information, including situation reports, activity reports, calendars for upcoming events, with fixed daily procedures for recurrence of actions,
- ❐ Manage access to the platform for partners such as National Public Health Authorities, National Competent Authorities, European agencies, Commission directorates and international partners
- ❐ Liaise and control structures at each partner's locations.

2.4 Communicating among players

Outcome expected

Communication procedures among the players provide accurate and timely information at all levels. Public Health will play a pivotal role as the main provider of information.

MS, Commission and Agencies

Good communication among all players in the event of a public health threat will require that a mechanism exists for timely and consistent distribution of information:
- ☐ between national bodies and regional authorities, i.e. all information available, especially health information, for all essential services.
- ☐ from the regional level to the local level and to individual healthcare facilities, including emergency facilities that may be established in the community to pass on this information.

Interoperability

Good communication requirements intra-Community:
- ☐ Specific websites with restricted access for health professionals and other groups (decision makers).
- ☐ SOPs to analyse and inform the competent structures and authorities in order to guarantee exchange of information between Member States.
- ☐ Regular updates for all relevant stakeholders.

2.5 Risk / crisis communication with media and public groups

Outcome expected

Although risk communication and crisis communication are very different disciplines, they often have common objectives. In dealing with either a risk or crisis event, the most important factor in communication is ensuring that timely, appropriate and accurate information is sent effectively to the right people.

Risk communication is the exchange and dissemination of appropriate information about risks to enable decision makers, stakeholders and the public to make appropriate decisions. It helps define the risk more systematically, assesses and considers stakeholder behaviours and psycho-social perspectives in decision making and communications, and encourages effective communications planning and messaging.

The principles of risk communication can also be applied in an altered or abbreviated fashion to crisis and emergency communication. As with risk communication, the communication function in a crisis or emergency should be an integral part of risk management.

Crisis communication involves communicating in a situation that somehow challenges the public's sense of appropriateness, tradition, values, safety, health, security or the integrity of the government.

Emergency communication is when there is a time-sensitive urgency to communicate to a select group of people as a result of an abnormal situation that requires prompt action, beyond normal procedures, in order to limit injury, damage or death to persons, property or the environment. Frequently, communications are very operational and intended to prompt or guide immediate action.

More than ever, communication is being recognised as essential to enabling organisations and governments to effectively manage risks. That's why communication has to play a fundamental role in the various phases of preparation, prevention, response, and recovery during an emergency or health crisis.

The nature of risk has changed considerably. New risks are created by the rapidly changing field of science and technology, the integration of economies and communication worldwide, and the public's expectations of fewer risks and greater control over their exposure to risks.

The risk issues concerning public health, namely pandemic influenza and chemical, biological and radio-nuclear events, pose a huge strain on resources. Managing these events depends heavily on an informed, engaged and cooperative public. By facilitating dialogue and the exchanging of essential information between stakeholders and the authorities, risk communication advocates transparency and builds trust, credibility for authorities and mutual respect.

It is important to involve the news media from an early stage in the planning of emergency preparedness. With good established relationships, the media can provide significant professional assistance during the response phase. Media are essential to:

- inform citizens quickly in everyday language
- help citizens to reduce risks
- mobilise society
- explain and build support for unpopular control measures
- represent the voice of ordinary citizens
- provide perspective and context.

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If risk / crisis communication is to be effective, there needs to be a strong communication team in place with adequate human resources, in terms of both number of staff and capabilities (multi-disciplinary knowledge, range of skills and necessary training). In a crisis, it must be possible to reinforce the communication teams quickly by internal redeployment or mutual aid between services or inter agencies and institutions.

All plans have to include a communication strategy, which includes

Pre-event phase
- ❒ Identify and equip a media centre
- ❒ Identify and equip premises where communication staff will be located
- ❒ Establish and maintain communication networks
- ❒ Identify key communication staff and their roles as well as back-ups [to act as spokespersons on public health issues during an emergency for multiple audiences and formats (spokespersons representing different ethnic groups, media spokespersons, community meetings speakers, etc.)
- ❒ Develop a robust internal briefing and liaison system
- ❒ Agree on communicator's role in a crisis management situation (e.g. closely linked to the emergency management team, guardian of organisational credibility and trust, designing communication strategies, public's representative in senior management meetings)
- ❒ Endorse the communication guidelines developed by WHO (trust, announcing early, transparency) and agree to act accordingly
- ❒ Create a list of key messages and how these will be used in a crisis
- ❒ Draft media releases and statements (related to key messages)
- ❒ Generate frequently asked questions and answers (related to key messages)
- ❒ Prepare advertising material to be used in a crisis
- ❒ Create web-based information that can be released immediately if needed
- ❒ Determine what information should be collected; collect and collate information;
- ❒ Assessment and understanding of stakeholders and public concerns
- ❒ Select what information should be communicated; to whom, prepare messages and have them validated
- ❒ Generate list of key media (specialist and mainstream)
- ❒ Enhance relationships with the media [establish contacts with key media personnel, understand how they work, brief them on their role, and determine how they can work together].

In order to streamline all stakeholders' activities, procedures and protocols have to be in place between all levels of crisis management involved (local, regional, national and international; trans-government and trans-sector).

Exercises and training should be regarded as an integral part of the emergency planning process. It is important that the appropriate staff is trained in their respective roles before an exercise is planned. Training for key communication staff and back-ups may include:

- ❏ Writing skills (e.g. designing briefings, press releases, statements, etc)
- ❏ Writing for websites
- ❏ Evaluating media coverage
- ❏ Using the internet effectively
- ❏ Using social networking for communicating
- ❏ Procedures and protocols in place

Event phase

The appointed media relations officer also coordinates public information and answers directly to the emergency controller or commander. The information coordinator should:

- ❏ Maintain lines of authority and responsibilities for the public information team
- ❏ Briefs with agency director, Emergency Operations Centre (EOC) command, and higher headquarters to update and advise on information intended for release, incident-specific policy, science and situation;
- ❏ Develop a timetable for disseminating emergency information, including advertisements for the emergency alert processes (on radio and television) and symbols;
- ❏ Present messages as a media package including features, background information and messages, with audio and/or video tapes when possible and appropriate.
- ❏ Consult with emergency management authorities to identify main issues and priority issues, and prepare a profile of the target audience.
- ❏ Work and relief scheduling for public information team to maintain 24-hour operation (2–3 work shifts per day) for at least several days.

Media information also needs to monitor media and ensure responsiveness. This activity encompasses:

- ❏ Triage of media requests and inquiries
- ❏ Response to media requests (e.g. daily press conferences, website updates)
- ❏ Production of media advisories, press releases, fact-sheets, b-roll
- ❏ Monitoring media through environmental and trend analysis (e.g. clip service, monitoring news coverage, MedISys and other similar information sources) to determine messages needed, misinformation to be corrected, media concerns and media interest during crisis
- ❏ Assessing the available telephone capacity to assess the need for additional lines in an emergency
- ❏ Response to public who request information directly from the agency by telephone (e.g. hotline), in writing, or by e-mail
- ❏ Timeliness and accuracy of public website information
- ❏ Public advertising of agency contact information
- ❏ Monitoring public through environmental and trend analysis to determine messages needed, misinformation to be corrected, public concerns and public interest during crisis.
- ❏ Have translation services ready to implement
- ❏ Go live with website (Q and A, situation report, notification, maps)

Post-event phase:

The communication plan must also include the possibility to debrief and analyse the various aspects of the event, and use the lessons learned to refine the emergency communication plan.

This should include:

- ❏ Identify what worked and what little things really made a difference or would have if they had been available
- ❏ Diagnose how well the communication plan worked
- ❏ Assess the news coverage and its impact.

Interoperability

Over the years, a wide consensus has arisen that, should the EU face a major health threat, the European Union and its Member States should aim for a coordinated approach to communication issues. A Health Security communicators' network linking the national risk management authorities, relevant European agencies and the European Commission, has therefore been established. The network members share experience and best practice on risk and crisis communication and communicate about measures taken by crisis managers, health-related recommendations and risk management.

The Commission maintains this network and supports its activities, which encompass:

- ▪ Addressing common communication preparedness aspects relevant to health threats, including CBRN, pandemic influenza and other major infectious diseases outbreaks.

- Communicating on measures taken by crisis managers, health-related recommendations and risk management.
- Preparing contributions for publication on the internet during an event; exchanging and if possible harmonising messages which can be used in the event.
- Establishing strong links between network members and building up trust between partners.
- Providing crisis communication expertise and guidance to decision makers and takers, e.g. on how to present health measures to the public.
- Helping to define an overall communication strategy for managing health threats identified by HSC, the Commission and ECDC and other European Agencies.
- Prior discussion of messages between partners during a health crisis through the dedicated Commission platform HEDIS.
- Monitoring media reactions during a crisis and reporting back to the network.
- Ensuring coherency with risk assessment agencies and their related communication activities.

The tasks include:
- ☐ Setting up exchange procedures (when to exchange information and what)
- ☐ Developing protocols for cooperation (common analysis of the event, understanding of wordings, agree on a line to take, agree on timeliness of action) and coordination (teamwork)
- ☐ Sharing their communication strategies, press releases, briefings, and public concerns in their countries
- ☐ Developing and maintaining contact list
- ☐ Identifying communication tools between partners (e-mail, web-platforms, audio and video conferences etc.)
- ☐ Ensuring consistency of approach to the media between Member States
- ☐ Providing translations of the Questions/Answers published on the web
- ☐ Comparing website and newspaper content in all Member States
- ☐ Establishing common standards
- ☐ Sharing lessons learned in Member States

2.6 Political advocacy

Outcome expected

Communication is necessary from the players to their political authorities to provide accurate and timely information. The political authorities will know the plan and request information on events through the indicated channels before taking decisions or before responding on political issues related to the event.

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Each plan must at least ensure that that the political hierarchy:
- ☐ Is informed and regularly updated about the plan(s), the role and competence of different players and the contact points.
- ☐ Has identified the key members of his or her emergency response team.
- ☐ Understands existing systems and processes for dealing with crisis events.
- ☐ Uses the channels providing timely and accurate information to decide.

Intra-Community political advocacy means:
- ☐ Council and Commission receive timely information of decisions with Community relevance;
- ☐ If needed, to accelerate relevant Council meetings for decisions of Community relevance.

3   Scientific/Evidence-based advice

In this context, scientific or evidence-based advice is the process of integrating the information through rapid consultation and identifying vulnerability and possible response through risk assessment, including support to determine appropriate action and countermeasures, and to identify the resources needed and ways to implement action.

3.1 Rapid consultation (experts, expert bodies) for advice

Outcome expected

A system will be in place to provide expert advice in Member States and at EU level. It will be available to the ministries and other relevant bodies in the Member States, to provide a pool of designated national expertise, to reinforce mutual assistance between Member States and to facilitate a common response of the EU to public health crises. Arrangements will exist for ad hoc consultation of networks (remotely or face-to-face) and conferencing facilities will be in place. However, when constructing lists of experts care needs to be taken over whether the experts are nominated by member states, or they are experts nominated by EU. Also, concern must be given to the fact not overloading any experts if they become experts to national governments as well as to EU (and possibly WHO, etc.).

Expertise, existing committees (e.g. Health Security Committee, EWRS contact points) and potential new scientific committees will be in place following existing procedures.

Procedures also need to be in place to cover other types of threat such as chemical and radiological threats.

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Checklist on rapid consultation about incidents with public health consequences:
- [ ] Are lists available of individual expertise?
- [ ] Are lists available of contact points?
- [ ] Do urgent procedures exist for rapid consultation of experts?
- [ ] Do these procedures include
  - ❒ public health experts with different specialisations (such as threat and risk assessment, preparedness and response)?
  - ❒ toxicology experts?
  - ❒ experts specifically on toxins?
  - ❒ experts specifically on the management of health effects of radiation?
- [ ] Do operational links exist to consult experts in epidemiology, laboratories, animal health, plant health and experts in food safety?

Interoperability

Operational links to exchange or to consult experts intra-Community, requiring:
- [ ] Arrangements for consultation of individual expertise for each kind of incident.
  - ❒ Lists (directory, register, inventory) of available national expertise/contact points in case of a CBRN event (chemical, biological, radio-nuclear), natural (e.g. climate change) incident or effects of infrastructure disturbances.
- [ ] Community contact points for access to expertise or relevant lists.
- [ ] Definition of the role of the EU Agencies (e.g. ECDC) as contact points for public health expertise and its role in the management/ maintenance of the public health expertise list.
- [ ] Operational links with and between the EU structures bringing together expert bodies in adjacent areas such as animal health, plant, food, civil protection, radiological issues.
- [ ] Operational links with and between the scientific expertise available in the ECDC and the Scientific Committees in the fields of consumer safety, public health and the environment (Decision 2004/210/EC), such as the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR).
- [ ] Urgent procedures to rapidly convene structures under Decision 2119/98 such as the surveillance component ESCON or to set up nominated expert groups (ex SARS WG).
- [ ] Operational links with WHO, Global Health Security Action Group (GHSAG) and other relevant international organisations.

3.2 *Quantitative assessment — Modelling*

All items being dealt within this section is in principle applicable to infectious diseases, climate change, biological, chemical and radio-nuclear events.

Mathematical models have been used in recent years to analyse the spread and control of infectious diseases as health threats and advise decision makers in the area of public health preparedness, risk assessment and crisis management. Models can also provide a quantitative assessment of an outbreak and can be used to predict the effectiveness of proposed control measures. Modelling of infectious agents is quickly becoming a tool of major importance for public health decision making and in view of the limited expertise on the subject, the EU added value of a coordinated approach on this subject is of great importance.

The combined use of remote sensing technology, Geographic Information Systems (GIS), spatial statistical techniques and mathematical models can help us (a) to refine distribution models of vector species, (b) to identify areas that are at the highest risk of being invaded by new vectors, (c) to identify vectors that pose the most serious threat to a given area and (d) to model how vectors, parasites and human hosts dynamically interact under conditions of extreme climate variability or climate change.

Modelling the dispersion of chemical agents is more highly developed than modelling for infectious agents. Modelling of the dispersion of a chemical cloud after a chemical incident (either accidental or intentional) has been considered a valuable tool for crisis managers in the civil protection area as estimation of the exposure of the affected population is of paramount importance for appropriate response actions (e.g. evacuation). Modelling of risk zones is currently one of the requirements in the Safety Plans for chemical facilities under the Seveso Directive (2003/105/EC).

Modelling of radiation dispersion has been developed in the radiation protection field and several activities have been undertaken at the Commission, where JRC has provided technical and scientific know-how, in conjunction with work by DG TREN, DG RELEX and DG JLS.

Capacity and expertise building in these areas is therefore necessary to allow the Community to deal efficiently with the public health effects and the effects on humans of exposure to harmful agents.

Reliable tools must be available for modelling, the interpretation of results, and their use in optimising the response actions. Two different areas need to be covered by modelling: 1) modelling of the dispersion of the harmful agent in the environment, and 2) modelling of the exposure of the population to the harmful agent.

Outcome expected

To increase the capacity in modelling and therefore in quantitative assessment of emerging health threats in Europe including infectious diseases, climate change, biological, chemical and radio-nuclear events.

To establish a European NEtwork on mathematical MOdelling (NEMO) for the purpose of accumulating epidemiological modelling capability in Europe, and extending the merits of the modelling tools to Member States with no or little such capacity. The NEMO Network can serve as an expert advisory group in crisis management for public health decision authorities at the national and European level. Close collaboration between Member States, DG SANCO, ECDC, EFSA and JRC is necessary to create the infrastructure needed for an operational modelling network at European level. The network will serve as a platform for all above mentioned health threats, infectious diseases, climate change, biological chemical and radio-nuclear with changing composition according to the subject under consideration.

Regarding chemical threats close collaboration between various authorities in the Member States, national response centres (e.g. EAPCCT - European Association of Poisons Centres and Clinical Toxicologists, National public health institutions), DG SANCO, and JRC would be necessary to create the appropriate models and communication procedures for an operational network at European level.

Modelling of the exposure of a population to harmful agents is fundamental for providing the authorities and the first responders with reliable predictions as to the number of victims and the severity of health effects. This information also affects the safety of the responding teams.

It is important to improve the quantitative assessment of the dispersion of harmful agents and to provide reliable estimations of their impact on the exposed population. However, dispersion models cannot substitute on-site measurements of the contamination after an incident with adequate analytical devices.

Also with respect to radiological threats close collaboration between various authorities in the Member States, national atomic committees, DG SANCO, EU Agencies and JRC would be necessary to create the appropriate models and communication procedures for an operational network at European level.

The overall outcome would be increased availability of reliable and validated modelling tools, tailored to the needs of public health decision authorities at national and European level.

Member States

Checklist on modelling for incidents with public health consequences:

- ☐ Modelling (infectious diseases, climate change-, chemical- and radio-nuclear events) included in planning at national level
- ☐ Identification of the existing capacity for modelling health threats at national level (within risk and crisis management bodies, academia or other research institutions)
- ☐ Identification of level of expertise in quantitative assessment at national level
- ☐ Implementation of existing (and development of new) models and methods for quantitative assessment of emerging health threats
- ☐ Identification of options for training in mathematical modelling and quantitative assessment in general
- ☐ Identification of appropriate data sets needed for the running of existing and possible new models. This may require substantial research and collaboration between various sectors at national level
- ☐ Systems ready for obtaining and sharing the data before and during outbreaks
- ☐ Facilities for communicating results and sharing knowledge and methods with public health authorities from other Member States.
- ☐ Satisfactory level of expertise in quantitative assessment
- ☐ Reliability and applicability of existing tools for threats of harmful agents under consideration and the conditions (e.g. open space, urban area, confined space such as metro station, stadium, etc.)
- ☐ Capacity building for validation of near-real-time modelling to support response actions and modelling of dispersion in different media (e.g. water contamination)

Agencies

- ☐ System for data acquisition and possible Europe-wide surveillance. Identification of appropriate data sets for the EU level.
- ☐ System ready for obtaining and sharing the data before and during outbreaks/emergencies
- ☐ Adequate data available for modelling approaches and further quantitative assessment
- ☐ Increase capacity for scientific advice and interpretation of modelling
- ☐ Qualitative risk assessment
- ☐ Advice on harmful agent exposure pathways and forecasted/estimated doses to different population groups to initiate protective public health actions
- ☐ Increase expertise on scientific advice and understanding of the health effects of harmful agent exposure

Commission

Checklist for management of incidents with public health consequences:

- ☐ Modelling (infectious diseases, climate change-, chemical- and radio-nuclear events) is included in the planning
- ☐ Creation and coordination of a European network for modelling the transmission dynamics and control of potential fast-evolving major health threats (SANCO-JRC)
- ☐ Identification of existing capacity for modelling health threats (from infectious diseases, climate change-, chemical- and radio-nuclear events) in EU-27, especially in risk and crisis management bodies in the Member States, and selection of the relevant national public health institutions
- ☐ Organisation of meetings to present and discuss new developments in the field (1-2 workshop per year)
- ☐ Creation of links between Member States for exchange of modelling data and know-how
- ☐ Implementation of existing (and development of new) models and methods for quantitative assessment of emerging health threats
- ☐ Identification of options for training in mathematical modelling and quantitative assessment in general for scientists from the Member States currently without capacity
- ☐ Increase the expertise and capacity for epidemiological modelling and quantitative assessment within the Commission (JRC, DG SANCO)

- ☐ Definition of acute exposure levels for the protection of the population (incl. the high risk groups such as infants, elderly, pregnant women) and the first responders
- ☐ Definition of an agreed list of priority agents and exploration of the results of EU projects

- [ ] Capacity building for validation of near-real-time modelling to support response actions and modelling of dispersion in different media (e.g. water contamination)
- [ ] Reliability and applicability of existing tools to the conditions/scenarios under consideration (e.g. open space, urban area, confined space such as metro station, stadium etc.). Link with the results of possible EU projects

Interoperability

Operational links for an intra-Community capability on forecast modelling, requiring:
- [ ] Platform for quantitative assessment of modelling expertise at Community level in the form of a network of experts.
- [ ] Definition of the role of EU Agencies as contact point for surveillance, public health expertise and qualitative risk assessment at European level. Provision of appropriate data for the modelling assumptions.
- [ ] Definition of the role of JRC as contact point for quantitative risk assessment, for scientific advice especially on modelling and for the coordination of the network of experts at the European level.
- [ ] Intra-Community flow of output to DG SANCO, which is responsible for risk management at the European level.
- [ ] Development of a common format for exchange of information, including input, output and basic assumptions, amongst models, users and authorities.
- [ ] Harmonized definitions

3.3 Vulnerability assessment

Outcome expected

National plans will include the capacity to assess the vulnerability of national structures and systems according to common standards pre-agreed at Community level. A Community mechanism will exist to approve the assessment.

MS, Commission and Agencies

Checklist on vulnerability assessment for incidents with public health consequences:
- [ ] Member States designate their experts and they participate in a system for consultation and use of this expertise. Member States develop vulnerability assessment processes taking account of the different variables, including security and safety issues.
- [ ] Each Member State has included in its national plans the capacity to assess the vulnerability of their national structures and systems. Each national assessment is mutually accepted at Community level based on common pre-agreed standards of vulnerability assessment.
- [ ] Critical infrastructures such as water supply, food distribution and threat of aerosolisable pathogens;
- [ ] National plans include in their vulnerability assessment data on chemical facilities (production and storage, e.g. Seveso plants, or OPCW national contact points) via intersectoral collaboration with the appropriate authorities
- [ ] Vulnerability assessment of the critical infrastructures identified;
- [ ] Set of minimum standard requirements for vulnerability assessment;
- [ ] Process of vulnerability assessment;
- [ ] Accreditation system;
- [ ] Interlinking between and cooperation with public health structures, authorities and other structures and services.

Interoperability

Operational links for an intra-Community capability on vulnerability assessment, requiring:
- [ ] Scientific expertise of the Scientific Committees established under Decision 2004/210/EC and the ECDC to propose critical infrastructures and a set of minimum standards for vulnerability assessment for Member States
- [ ] Each national assessment is mutually accepted at Community level based on common pre-agreed standards of vulnerability assessment. A Community mechanism to approve the assessment exists.
- [ ] Cooperation with DG-ENV supervising the application of the Seveso Directives, as well as the JRC on chemical accidents. Exchange of necessary information (maps, lessons from accidents etc.)
- [ ] Cooperation and inclusion of the proposal under the Strategy on Internal aspects of the Fight against Terrorism of the Council / Commission on critical infrastructures, lead by DG JLS (European Programme for Critical Infrastructure Protection, EPCIP) (Communication on Critical Infrastructure Protection in the fight against terrorism 2004)
- [ ] Inclusion in the relevant legislation of the vulnerability assessment process and the accreditation mechanism.

3.4 Risk assessment and options for countermeasures (control principles)

Outcome expected

A Community mechanism and decision making process to declare a Community alert and to select the best option to respond to a potential threat will exist at EU level. The system will allow rapid circulation of information between the Member States and the Commission. It can be used in the very first days of an emergency for linking of Emergency Operation Facilities, teleconferences and rapid consultation between Member States and the Commission. A dedicated and protected mailbox or a website will help manage information sharing as the event evolves. Public health (counter) measures for disease control will inevitably be different in different countries depending on the health infrastructures and depending on the nature of the event (biological, chemical, environmental, linked to a natural disaster or complex situation, etc.). They could include identification and quarantine of contacts; measures to increase social distance; measures to decrease the interval between onset of symptoms and isolation of ill patients; disinfection; limits to travel; entry and exit screening; vector control, etc.

Scientific and epidemiological evidence will be needed, alongside social, economical and logistical considerations, to sustain implementation of public health measures. In this stage of risk management, technical and decision groups will meet to identify the available management options, compare and weigh up various health risks along with economic, political and social factors. They may use decision criteria such as cost-benefit studies, cost-effectiveness analysis, risk-benefit analysis or comparative risk analysis.

Information, guidelines and scientific evidence will be developed on generic and specific control measures to be envisaged in public health emergencies.

MS, Commission and Agencies

Checklist on risk assessment and countermeasures for incidents with public health consequences:
- [ ] Decision process for public health countermeasures based on scientific and epidemiological evidence;
    - ❐ Including public health structures;
    - ❐ Linking social, economic and logistical considerations to sustain implementation of public health measures;
- [ ] Legal back-up in areas other than public health for the implementation of countermeasures;
- [ ] International commitments for notification and cooperation, including the IHR.

Interoperability

Operational links for an intra-Community capability to provide scientific evidence for decision takers, requiring:
- [ ] Commission Decision(s) establishing information, consultation and coordination procedures on measures to coordinate the control and prevention of communicable diseases through the Community Network. (Prior information Decision)
- [ ] Commission Decision on a procedure to declare rapidly a Community public health alert implying extraordinary and temporary concerted actions at Community level under the Community Network for the epidemiological surveillance and control of communicable diseases (Decision 2119/98/EC) (and under the Pharmaceutical legislation) (Stand-by Declaration)
- [ ] Common information, guidelines and scientific evidence on generic and specific control measures to be envisaged in a public health emergency
- [ ] Meetings under Decision 2119/98/EC (ESCON, EWRS) — Commission Decision EWRS
- [ ] Meetings with other structures (e.g. Standing Veterinary Committee and HSC)
- [ ] Advice of the ECDC, Scientific Committees, EFSA, EMEA etc.
- [ ] Community Crisis Centre(s) linked with the relevant scientific structures, linkage with ARGUS, and a Central Crisis Cell within the Commission / Council (in the meantime linkage with RELEX-crisis centre, MIC, JLS crisis centre etc.)
- [ ] Link with Member States and Community Health Emergency Operating Centre and role of the ECDC.
- [ ] Programme on the Strategy for Internal aspects of the fight against Terrorism (Council — Commission — EU-Counter terrorism coordinator)
- [ ] CBRN-Programme
- [ ] Civil Protection Mechanism (Council Decision 2001/792/EC of 23/10/2001 establishing a Community mechanism to facilitate reinforced cooperation in civil protection assistance interventions)
- [ ] Cooperation with WHO through Community Network on communicable Diseases.

3.5 Determine collective protection (international dimension)

Common guidelines will be established on notifying each other in advance about generic and specific control measures to apply for embassies, international crew and transport. They will assist the decisions to be made at different levels of authority as the threat emerges. These decisions will range from population-based recommendations (for example, whether to cancel mass gatherings or close schools and public places) to individual measures such as recommendations to airline crew or the general public.

MS, Commission and Agencies

Checklist on the use of the guidelines
- [ ] Communication and update of guidelines to the appropriate authorities
- [ ] Feedback to central level (Member States — Commission)

Interoperability
- [ ] Role of EU Agencies (e.g. ECDC, ECHA) in advice
- [ ] Linked with relevant Commission services in TREN — EMPL — RELEX and others.
- [ ] Linkage with WHO — IHR for fast updating.

3.6 Determine corresponding action, resources for action, and ways to implement action

Outcome expected

Once the control principles are identified (see 3.5), there is value in sharing information and resources, scientifically and logistically, on the corresponding action, and ways to implement it. Where needed, questions about responses will be addressed together with the authorities such as civil protection, law enforcement, military, etc. Once set up and dealt with by Member States, the Commission fills in the gaps where a Community approach is of an added value. Lists will be available of organisations working in the Community, with information on their capacity to assist with emergency response and recovery activities. Lists will be drawn up of recovery items not available in the local community that would need to be obtained abroad. Information will be obtainable quickly on customs and taxation regulations covering the importation and transit of response and recovery (and other) items. Information will be available on essential response and recovery resources that will allow a rapid response, e.g. water supply systems, sanitation systems, health networks, alternative shelter sites and materials, ports and transport networks, warehouses, and communications systems.

MS, Commission and Agencies

Checklist for incidents with public health consequences:
- [ ] List of relief (consequence) management authorities and structures;
- [ ] List of contact points (CP)
- [ ] List describing mandatory action to take, step-by-step according to the extent of the event (e.g. sample taking requires CP outfit; crime scene requires law enforcement intervention)
- [ ] a), b) and c) (these points above) include link with public health structures and authorities;

Interoperability

Operational links for an intra-Community capability to determine action to respond, requiring:
- [ ] Lists of organisations working in the Community, with information on their capacity to assist with emergency response and recovery activities,
- [ ] Lists of recovery items not available in the local community that would need to be obtained abroad or could be supported by Community initiative
- [ ] Information on customs and taxation regulations covering the importation and transit of response and recovery (and other) items;
- [ ] Information on essential response and recovery resources that will allow a rapid response, e.g. water supply systems, sanitation systems, health networks, alternative shelter sites and materials, ports and transport networks, warehouses, and communications systems. (protection of Critical Infrastructures EPCIP)
- [ ] EUROPOL (Law Enforcement Network, LEN)
- [ ] Other response mechanisms: Civil Protection Mechanism, EMEA, DG Research
- [ ] Military
- [ ] Programmes on strategies …(see above)

☐ International organisations, including WHO, OIE, WHO-IPCS, OPCW

4 Health Crisis Management Structures

In principle, each Member State will be responsible, under Art. 152 EC Treaty, for the management of a health crisis on its territory, especially from communicable diseases. The specific modalities they have put in place to coordinate the necessary urgent controls in crisis situations remain, with assistance from intervention teams if so required.

The organisation of health crisis management structures should take into account that different EU legislation exists for diseases transmitted from food or other products, or plants, or animals, or caused by chemical, physical or radio-nuclear agents directly. In the event that a biological threat is identified, the health sector will need to take the leadership in the management of the crisis, while in the event of a chemical or a radio-nuclear event this may be different, especially among the different EU Member States. In this case the health sector is usually responsible for managing the consequences as regards casualties, deaths and health effects on the population in general.

The appropriate tool for coordination on risk management has been established for communicable diseases with the European Community Network for the Surveillance and Control of Communicable Diseases (Decision 2119/98/EC) and in more general terms by way of the Health Security Committee (Presidency conclusions from 2384th Council meeting (Health) 15 November 2001, Council conclusions 22 February 2007 (6226/07), and Council Conclusions of 16 December 2008 (2916th Employment, Social Policy, Health and Consumer Affairs Council meeting) bringing into permanent communication with one another, through appropriate means, the European Commission and the competent public health authorities in each Member State responsible for determining the measures which may be required to protect public health.

It is at the discretion of each Member State to decide if a threat is of the level to activate a Command and Control Structure (CCS) operating at national level, in each Member State. Various factors could be taken into consideration in the decision to activate the CCS, such as the rapid alert systems, the need for extended information, consultation or coordination and therefore the need for extended working hours

In order to be able to make clear and timely decisions at the level of the actors/stakeholders it is essential to know who is in charge of management and control of the threat. It is as well essential to identify and eliminate potential legal complications especially in cross border cooperation and collaboration. Therefore a legal framework dealing with public health issues (e.g. epidemics, pandemics, vaccination campaigns, travel restrictions, treatment, emergencies) should be in place.

The national plans should explain for the different events (communicable diseases, CBRN attacks, climate change, floods) who is responsible for taking decisions; who has the capacity to transform the decisions into measures at national level; and who communicates with international organisations and other Member States. The Communicators Network should be responsible for informing the media and the public (see Chapter 2). When establishing these structures Member States should take special account of formal links with other international organisations (e.g. the relations between WHO and the NFP under the IHR (2005)) and incorporate these structures into the CCS. It is also essential to outline who is in charge for sub-elements of the crisis (such as triage operations, incident and or outbreak investigations, trade bans, travel advisories, movement restrictions, etc). Therefore a 'link/contact' structure is needed, in order to: (i) identify the minimum activities and required steps that need to be undertaken for a co-coordinated approach; (ii) provide logistic support to the command and control structure for this coordinated approach; (iii) follow their implementation during the various stages of the event.

Coordination of Member States' measures to combat health threats is needed.

Therefore at EU level a 'link/contact' structure should be activated and in permanent contact with: (i) the command and control structure of the Member States through their public health component (= SANCO HEOF), and with

(ii) the European Commission 'link/contact' structure (= ARGUS).

At EU level, both 'link/contact' structures are in permanent contact with each other and with WHO when relevant.

One important part is guaranteeing rapid and correct contact points so that there is no doubt how to get into contact with other actors/stakeholders.

4.1 Trigger: Getting the Alert to the competent authority (Member States, European Commission, EU Agencies)

Health emergency planning

In each Member State and in the European Commission there should be *one* 'focal point' responsible for administrative matters regarding health emergency planning etc. This functional point in each Member State and the European Commission is responsible for the administration, updating of lists etc., and this function is only guaranteed during office hours.

Existing structures should preferably be used, if appropriate, avoiding another level of contact points for this purpose. If there are different contact points for different areas (HSC, IHR etc.) one of these contact points could be appointed as the administrative contact point for health emergencies.

The administrative contact point for health emergencies should have the responsibility to link existing contact points together.

Name: Administrative contact point for health emergencies.

Health emergency functional immediate access

There should be *one* <u>functional</u> contact point 24/7/365 in each Member State, at the European Commission and in Agencies, <u>to be contacted in a health emergency</u>, <u>in case of</u> situations not covered by special EU legislation and systems, i.e. unclear cases. In any other cases, the existing structures should be used.

This <u>functional contact point 24/7/365</u>, when contacted, will then identify <u>the</u> responsible operational body for the particular event.

If there are different contact points for different areas (RAS-BICHAT, RASFF, ECURIE, RAS-CHEM, RAPEX, EWRS, IHR etc) one of these contact points could for example be appointed as this <u>functional contact point 24/7/365</u>.

Name: Functional contact point (24/7/365) for health emergencies

Health event manager

The structure/ authority/ position in charge for dealing with the ongoing threat from the point of view of health, and therefore for managing the command and control structure, is referred to in the rest of this chapter as the 'Health Event Manager' (HEM)

It is essential that national plans outline the role of this structure/ authority/ position and refer to the relevant legal acts or to the constitution.

Name: Health event manager.

4.2 Trigger: deciding the response activity

Outcome expected

Structures and procedures will be in place to capture the necessary background information for triggering a response to a threat, and to forward the information in good time.

The information will lead, at Member State and European Commission level, to proper decision making based on the nature, magnitude and other features of the threat and leading to the required action.

Following detection by the national system, threats will be labelled and will trigger a defined level of action depending on their severity. Examples of events allowing activation of the trigger would include a major and escalating Community-wide outbreak of an unknown illness, a major chemical, biological, or radio-nuclear contamination (trans national water supply system, a lost source or an accidental release of radiation affecting more than one Member State), an influenza pandemic (although specific plans exist for this issue), a confirmed deliberate or accidental release of a serious CBRN (chemical, biological, radio-nuclear) agent, etc. This level of threat is labelled as PHEIC (Public Health Emergency of International Concern) under the International Health Regulations (2005) (IHR) and is to be reported to WHO through a link that should be maintained as long as required by the IHR.

The response activity (described in the following chapters) will be based on risk assessment, risk management and communication, allowing the immediate consideration of all the necessary options for measures within the competence of the relevant services and authorities. This mechanism will involve the relevant European Commission and Member State departments and is applicable to sectors within and outside the health sector.

This mechanism will allow coordination with and between the Member States' competent authorities and structures to enable the required activities and resources to contain the threat.

Requirements

These requirements are considered as a set of minimum standards. They mainly concern logistics, infrastructures and human resources.

Member States

- [ ] Implement the relevant 24/7/365 surveillance / notification / epidemic intelligence systems
- [ ] Establish procedures for timely agreement on the need to trigger a response to an identified/labelled threat
- [ ] Establish clear procedures for timely notification of the alert to all entities concerned at national / regional level
- [ ] Established clear guidelines for the responsibilities of different actors and SOPs (Standard Operation Procedures) to initiate response activities (checklists for each post) appropriate for each type of threat (e.g. biological, chemical, radio-nuclear, natural)
- [ ] Establish adequate links through agreements/ legal acts/ MoU between different political entities / stakeholders (national, regional, local)
- [ ] Keep procedures regularly updated and maintain infrastructures
- [ ] Educate and train the staff involved (basic principles of crisis management)
- [ ] Organise national exercises to maintain and improve functionality / efficiency of the system and participate in international exercises.
- [ ] Ensure operational link to WHO (using the structure developed under IHR (2005))

Agencies

- [ ] Implement the relevant 24/7/365 surveillance / epidemic intelligence systems (e.g. IHR 2005, EWRS, RAS-BICHAT)
- [ ] Establish criteria for issuing a threat assessment (scaling, EU added value, contact with Member State(s) concerned, experts)
- [ ] Establish clear guidelines for the responsibilities of staff involved and SOPs to initiate response activities (checklists for each post) appropriate for each type of threat (e.g. biological, chemical, radio-nuclear, natural)
- [ ] Keep procedures regularly updated and maintain infrastructures
- [ ] Educate and train the staff involved (crisis management)
- [ ] Organise indoor exercises to maintain and improve functionality / efficiency of the system in the agencies
- [ ] Develop tools to support Member States in triggering after previous analysis.

European Commission

- [ ] Establish a 24/7/365 information acquisition team
- [ ] Establish procedures for timely agreement on the need to trigger an EU response to an identified/labelled threat
- [ ] Establish clear guidelines for the roles and responsibilities of staff involved and SOPs to initiate response activities (checklists for each post) appropriate for each type of threat (e.g. biological, chemical, radio-nuclear, natural)
- [ ] Keep procedures regularly updated and maintain infrastructures
- [ ] Educate and train the staff involved (crisis management)
- [ ] Organise indoor exercises to maintain and improve functionality/efficiency of the system
- [ ] Organise EU exercises (even full-scale) to maintain and improve functionality/efficiency of the system
- [ ] Improve legal aspects in order improve interoperability (keep in mind IHR (2005))

Interoperability

Intra-Community activity leading to:

- ☐ Establishment of procedures for response activity
- ☐ Unequivocal labelling of threat categories/scaling across all Member States
- ☐ Analyse the triggering procedures in all Member States in order to increase interoperability
- ☐ Define and identify the responsibilities of EU Agencies (e.g. ECDC, ECHA, EURATOM) in this field as regards activation and alert procedures, communication lines and logistics.
- ☐ Communicate to other Member States procedures/organisation charts/algorithms used in each Member State in order to increase interoperability (See 4.1)
- ☐ Organise EU exercises (even full-scale) to improve interoperability
- ☐ Improve legal aspects in order improve interoperability (keep in mind IHR (2005))

4.3 Response: the Command and Control Structure (CCS)

See also 4.5 The Health Emergency Operations Facility

Outcome expected

Emergency management is a very complex task, aiming at taking the best possible decisions and allocating scarce resources to achieve priority objectives. Because of this complexity, clear procedures and tools (as simple and user-friendly as possible) greatly improve the effectiveness of the system. Optimisation of work teams requires appropriate supervision and coordination of staff and mutual accountability. These should be developed and evaluated by all stakeholders.

Flexible/adaptable organisational structures will minimise the impact of unavoidable random events/effects.

Each stakeholder ought to be technically proficient and know their organisation and tools well, to use their full capabilities.

The specific crisis structure should be integrated into normal day-to-day management operations.

Member States (Crisis Management Structure =CCS), Agencies (Emergency Operation Centre EOC) and European Commission (Health Emergency Operation Facility HEOF)

- ☐ Minimum requirements for CCS, EOC and HEOF are (see checklist for details):
  - ❒ Relevant / allocated staff can be in place at short notice
  - ❒ all staff are informed / trained
  - ❒ Organise additional complete shift(s) of staff if crisis requires 24-hour operation for many days
  - ❒ Access to the CCS building / room is granted to all relevant stakeholders on a 24/7/365 basis
  - ❒ Standard operational procedures for all functions are described
  - ❒ Checklists for critical procedures are easily accessible
  - ❒ Contact lists are in place
  - ❒ Start a specific log book for the event to guarantee proper documentation of actions
  - ❒ Communications between the CCS, EOC, HEOF and the RAS systems (EWRS, etc.) are established, tested and are robust without risk of being overwhelmed by dense information traffic or by technical problems
  - ❒ Direct phone lines should be secured
  - ❒ Identify and designate alternate facilities to ensure continuation of operations in case a regular facility is inaccessible
  - ❒ The access to phone/video-conferences is known and granted according to assigned roles in the CCS.
  - ❒ Create a functional e-mail box dedicated to the current crisis
  - ❒ The system is scalable to meet the needs of an increasing or decreasing resource-intensive
  - ❒ response
  - ❒ The system is flexible to respond to unanticipated variables; health risk managers at every level have the autonomy required to respond to changing circumstances while informing higher echelons
- ☐ Provide, in the same building/on the same floor, facilities to meet the basic needs of the staff members
- ☐ Develop solutions to cope with extreme conditions (i.e. power cut, lack of staff, failure of IT system)

Intra-Community activity leading to:

☐ Achieve the best possible level of standardisation / harmonisation of health crisis management structures throughout EU

☐ Organise exercises (as frequently as possible) at national/EU level.

☐ Organise training courses at national/EU level.

☐ Allocate time/staff/budgets for exercises/training. Competent and dedicated staff could prove more effective than technical equipment.

4.4 Linking responsible Health Event Managers

Outcome expected

The confirmation (by analysis of information on risks) that the threat can be labelled as severe or major will result in the activation of (i) the Command and Control Structure as described above and (ii) the Link/Contact structure as described below.

This confirmation will also lead to labelling of the threat under the IHR (2005) as a PHEIC and therefore activate a link with WHO.

The European Commission's services (SANCO-HEOF, with other relevant actors) will contact the Member State(s) concerned to assess the situation (information on the threat circumstances, possible/expected evolution of the situation, etc.)

The Link/Contact structure of SANCO-HEOF will then provide a virtual or on-site cooperation capacity, in order to: (i) collect and share all available relevant information; (ii) improve evaluation of the data collected and; (iii) identify the appropriate risk management options.

The main objective of this structure is continuous communication on relevant aspects of the assessment and management of the health threat, in order to provide a global European overview of the situation to support the Health Event Managers in their tasks.

When the initial phase is over, a 'crisis-operational rhythm' will be set in place, following a time schedule agreed by all. A daily work schedule will be implemented, identifying time slots for exchanging information between Member States.

Depending on the situation, this non-binding work schedule may need to be adapted and the procedure (request, website information, audio/video conference) may be performed more than once a day or more rarely, maybe every second day etc. Member States not able to deliver requested data 'on time' can deliver the next day. Delivering the data during the audio/video conference will not be allowed.

Member States

Requirements

☐ A Command and Control Structure is in place and operational

☐ Plan integrates:

    ❏ The thresholds and the scaling of alert that lead to <u>national</u> activation of alert

    ❏ The European Community agreed thresholds and the level of alert that lead to Community activation

    ❏ According to the scaling of the event, Standard Operating Procedures (SOPs) to activate/de-activate the crisis room/staff/equipment <u>and</u> to designate a HEM in charge of the Command and Control Structure

    ❏ SOPs ensuring rapid transmission of information in crises, a Command and Control Structure team member (<u>not</u> the HEM) should be assigned to the monitoring of the alert systems (e.g. EWRS).

    ❏ Every plan includes a commitment to Community cooperation for the health risk manager and deputy.

    ❏ Every plan includes involvement of the appropriate agency (or combination of agencies) for the management of health effects per type of threat identified

☐ A <u>national </u>link/contact structure should exist to support the command and control structure regarding national management of crisis impacts at other levels (local/ regional) and on other sectors (Police, Transport, Travel, Education, Food Supply) by dealing with triage operations, incident and or outbreak investigations, trade bans, travel advisories, movement restrictions.

    ❏ According to scaling and impact, SOPs to activate/de-activate the national link/contact structure to other sectors The political authorities, chains of command and task assignments between the structures are clearly identified (particularly regarding health risk decision-making), and tested by all stakeholders

- ☐ SOPs to liaise with the European Commission's services coordination network when necessary
- ☐ Secure all legal aspects of the plan

Agencies

Requirements
- ☐ A crisis management structure is in place and operational
- ☐ Plan includes:
    - ☐ The European Community agreed thresholds and the level of alert that lead to Community activation.
    - ☐ According to scaling, SOPs to activate/de-activate the crisis room/staff/equipment <u>and </u>to designate an equivalent to HEM
    - ☐ The authority for the overall command and the authority for individual components of the response are all identified
    - ☐ Secure legal aspects of the plan (among which is confidentiality when communicating on EWRS)

European Commission

Requirements
- ☐ A crisis management structure is in place and operational
- ☐ Plan includes:
    - ☐ The European Community agreed thresholds and the level of alert that lead to Community activation.
    - ☐ According to scaling and impact, SOPs to activate/de-activate the link/contact structure (HEOF) to allow coordination of measures against the health threat.
    - ☐ SOPs to set up a virtual or on-site cooperation capacity to collect and share all available relevant information in a way that is understandable and useful to all partners in the Member States, improving evaluation of the data collected and proposing appropriate risk management options
    - ☐ SOPs to inform the Member States and the competent EU Agencies of the actual activation of this link/contact structure.
    - ☐ Secure legal aspects of the plan
- ☐ A European Commission network (ARGUS) exists to support the action of Member States by coordinating the different services.
    - ☐ According to scaling and impact, SOPs to activate the European Commission's coordination (ARGUS).
    - ☐ The political authority for the overall command and the political authority for individual components of the response are all identified
    - ☐ Have basic knowledge on existing health crisis management structures in each Member State (See 4.1).
    - ☐ Improve current RAS websites

Interoperability

Intra-Community activity leading to:
- ☐ Practical functioning of the Link/Contact structure linking the responsible Health Event Managers of the Member States involved, European Commission departments and Agencies. This requires the European Commission public health services to:
    - ☐ Develop current virtual capacity (HEDIS)
    - ☐ Organise training courses and exercises (as frequently as possible) at national/EU level.
    - ☐ Allocate time /staff /budgets for exercises / training.

4.5 The Health Emergency Operations Facility (HEOF)

Outcome expected

The Link/Contact structure for a health crisis is the Health Emergency Operations Facility (HEOF) of the Commission operating in Luxembourg. Its activity has been agreed at European Community level and formally endorsed, taking account of subsidiary principles. If required, the Health Event Managers will cooperate with competent authorities and services other than human public health, as specified in their national plans.

The Health Emergency Operations Facility operates as the public health hub for linkage with the centralised national / European Community Crisis Management structures. All stakeholders will provide information to each other. They will be able to feed into their decisional process the information displayed on a secure website monitored by the Link/Contact Structure.

The HEOF will be a tool that can provide decision makers with:

(i) fast and comprehensive international situation awareness and analysis;

(ii) transmission of information about measures implemented in other Member States

(iii) effective coordination of responses.

Member States

Requirements:
- ☐ Every plan includes commitment to Community cooperation on health risk-crisis management.
- ☐ SOPs to link with the HEOF/ EOF
- ☐ SOPs to supply relevant data to European Commission tools: the RAS/the virtual cooperation capacity (HEDIS) when necessary
- ☐ if possible delegate an expert (contact point) to the Facility (e.g. HEOF in Luxembourg) in order to improve interaction between Facility and Member States

Agencies

Requirements:
- ☐ SOPs to link with the stakeholders (Member States, HEOF, SANCO, ARGUS)
- ☐ SOPs to supply relevant data to European Commission tools: the RAS/ virtual cooperation capacity (HEDIS) when necessary
- ☐ A clear mandate for the ECDC and any other agencies involved:
  - ❒ Risk Assessment updated according to evolution of risk and implementation of response
  - ❒ On request: provide European Commission with recommendations for risk management:
    (i) exchange scientific advice: ad hoc & real-time consultations for precautionary and control measures (e.g. assistance in epidemiology investigation)
    (ii) collection/analysis of data, including from teams of experts (e.g. on isolation procedures)
- ☐ Delegate an expert (contact point) to the Facility (e.g. HEOF in Luxembourg) in order to improve interaction between Facility and Agency

European Commission

Requirements:
- ☐ SOPs to link (e.g. the HEOF) with the Member States and EU Agencies. This is essential for matching the Facility's actions to the Member States' needs in times of crisis
- ☐ SOPs to link with SANCO and ARGUS
- ☐ Inform, through EWRS and RAS-BICHAT, that the follow-up of this crisis is, from this point, only on HEDIS
- ☐ Situation report: develop current virtual capacity (HEDIS) for crisis/operational rhythm, which includes:
  - ❒ Collection of relevant data (scientific and/or operational) allowing the most effective management of the ongoing health threat crisis.
  - ❒ Monitoring of information sources and validation of data (e.g. provided by Member States and/or Agencies). Member States must be able to rely on this information to adapt their response.
  - ❒ Data analysis in order to monitor coordination of response on EU territory
  - ❒ Rapid and concise display of data (according to some SOPs, e.g. identification of source) in an easily identifiable and readily locatable way. SOPs on information sharing with Agencies (e.g. ECDC) / Organisations (e.g. WHO) and integration of this information on the Facility website.
- ☐ Activity report: SOPs to coordinate the response on EU territory which include:
  - ❒ Identification of the options available to prevent, eliminate or reduce to an acceptable level the risk to human health and updating of these options on the basis of the new information available and the development of the situation
  - ❒ Avoiding conflicts in the implementation of different national control strategies.
  - ❒ Organising logistical support for planned operational activities on a continuous basis throughout the threat activity.

❐ Organisation of communication to the public on the risks involved and the measures taken by involving the Health Security Committee Communicators' network (see 2.5 Risk/crisis communication with media and public groups).

☐ Develop mapping, as it provides an excellent 'snapshot' overview. Maps must be constantly updated, and display clear key information (epidemiological and/or operational)

Intra-Community activity leading to improved efficiency of the Health Emergency Operations Facility:

☐ Identify the requirements and needs of the potential users of the on-site tool (HEDIS),e.g. by conducting a survey among the stakeholders: Member States, SANCO, HEOF, ECDC, WHO.

☐ Investigate and address all technical issues with all stakeholders:
  ❐ 'Pre-requisites' software for accessing the website, with information on (i) where/how to find/download them safely; (ii) when to update them.
  ❐ Server issues (speed)
  ❐ Password issues: resetting/reminder
  ❐ System resistance to stress and overloading

☐ Keep stakeholders informed about new developments of the tools

☐ Organise regular training and exercises with all potential users

4.6 Special aspects of biological, chemical, radio-nuclear and climate change events

For these events the management structure needs to be complemented with expertise in the respective field depending on the situation. Otherwise there are no further specific needs for the management structure in these events.

4.7 Command and Control Structures Checklist

Staff management

Staff management is a cornerstone during a crisis. Competent and dedicated staff could prove more effective than technical equipment. Staff management includes:

☐ Staff present in the CCS should be addressing all the following issues: strategic, operational, logistical, administrative, financial and media communication

☐ All levels of staff working in the CCS should be trained/competent for their function

☐ They should be using the terminology and the technology they are familiar with

☐ The flow of information should allow each staff member to perform assigned tasks as well as circumstances allow, and to transmit information effectively

☐ In case of shifts with untrained staff (second or third shifts, unforeseen difficulties , members of different organisations / agencies) information to facilitate performance of tasks by untrained staff is provided: user-friendly handbooks, checklists, pocket field guides, task orientation / standard operating procedures manuals

☐ To improve situation management capacities, consider team building. People used to working together are less susceptible to stress.

Standard Operating Procedures (SOPs)

Well-established SOPs allow optimum staff performance and lead to swift action during crisis management.

☐ All SOPs have been prepared with and tested by all relevant stakeholders

☐ The responsibilities and tasks of each function are clearly described (strategic, operational, logistical, administrative, financial and media communication)

☐ The hierarchical structure for stakeholders is described

☐ The relation between hierarchical sectors is described

☐ The decisional flowchart and measures to be taken by each department are in place

☐ The relation/connections between health and other emergency sectors (national / international level) are described

☐ Arrangements for phone / video-conferences should include: who is attending (procedures), where does it take place (rooms), which system is used (tools).

- [ ] SOPs include the steps for an increasingly or decreasingly resource-intensive response (alternate staff, equipment, facilities, finance)
- [ ] SOPs include reassignment of staff (same department or not) according to needs, and ensure continuity of core activities.
- [ ] SOPs for granting access to the CCS should be known by the 24/7/365maintenance team

Logistics and technical aspects

See also the document 'Minimum requirements for crisis rooms' in Annex 1
- [ ] Monitor activation and validity of badge for every staff member granted access to the CCS building/room
- [ ] Relevant checklists are easily accessible (staff know where to find them)
- [ ] Checklists for critical procedures are updated on a regular basis
- [ ] Regular update of contact lists is a challenge (including maintenance team)
- [ ] Template of universal logbook is ready
- [ ] Technical maintenance team should be available 24/7/365
- [ ] Direct phone lines should be provided by two different service providers for the CCS, in order to avoid failure
- [ ] Catering and drinks should be provided for staff in a chill-out space
- [ ] Resting, sleeping and bathing facilities should be accessible to staff members, without interfering with operational support

5 Health sector preparedness

A public health event will almost always put an added strain on the health sector and preparedness and planning are needed when adapting to the new requirements. Principles for crisis management will inevitably vary in different countries, depending on the health infrastructure, and the ability to manage extensive public health events will also differ. When there is a need for support across borders it is essential to understand the procedures employed in the receiving country. To achieve this understanding, cross-communication networks should be created between countries and sharing of information on planned activities would be useful in the development of new national plans. Within the Commission and in some Member States health matters related to the pre-hospital setting are handled by Civil Protection.

5.1 Investigation

Outcome expected

Investigation of the event and evaluation of the response needed are prerequisites for dealing with a public health threat. The resources to do this will be identified before an incident and procedures to utilise them will be developed. Pooling the investigating resources enhances preparedness and strengthens the possibilities for an international response to a major event outside the EU.

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Checklist on investigation and response teams:
- [ ] National plans include provisions for fast deployment of investigation and response teams
- [ ] Guiding principles for international operations are endorsed
- [ ] Who are the competent authorities / structures?
- [ ] Are issues other than public health covered in the event of an incident? Such as the police, security, others?
- [ ] Are operational links in existence and in use with WHO, other international public health organisations?

Interoperability

Intra-Community activity leading to:
- [ ] An EU response capacity is operational for EU and international activities
- [ ] Operational links with focal points within EU, WHO and other relevant bodies (e.g. ESCON, EU mechanisms on animal health, plant, food, civil protection, radiological issues, law enforcement, EUROPOL WHO/GOARN, WHO/IHR, etc.)
- [ ] ECDC role as coordinator and evaluator of the process is clearly defined for an event concerning communicable diseases.
- [ ] ECDC develops an activation mechanism, communication lines and logistics for an event concerning communicable diseases.
- [ ] ECDC sets up a mechanism to identify terms of reference and teams on an ad-hoc basis for an event concerning communicable diseases.

5.2 Incident management

This section deals with the activities that the health sector has to address in the event of an incident.

5.2.1 Incident management outside hospital

5.2.1.1 First aid and ambulance care

Outcome expected

Pre-hospital care is a crucial element in the 'chain of survival'. National plans should give a clear view of the existing system for providing first aid, Basic Life Support (BLS) and ambulance services, including alarming and dispatching. Roles and responsibilities of players and available resources will be described. The role of ambulance care will be defined, and conditions for using it as a function of the nature of crisis and emergency management system. National plans should also focus on the current status of cross-border cooperation in the provision of emergency medical care.

Checklist on first aid and Ambulance Care:

- [ ] National plans include arrangements for providing first aid; the roles of governmental institutions and non-governmental organisations are defined, including alarming and dispatching
- [ ] Collaboration between Health and Civil Protection, where appropriate
- [ ] Role of Emergency Medical Services (EMS) in crisis and emergency management is described in national plans
- [ ] Crisis and emergency preparedness plans for EMS are legally required and exist
- [ ] Crisis and emergency management training for EMS personnel exists
- [ ] Patient safety measures (matching the patient with wrist bands, triage cards etc.) are implemented

Interoperability

Intra-Community activity leading to:

- [ ] International cooperation agreements (protocols) on emergency medical care with other countries exist, at least for reciprocal cross-border cooperation
- [ ] The use of European emergency number 112

5.2.1.2 General Practitioners and primary health care's professionals

Outcome expected

For some public health events such as epidemic respiratory syndromes, pandemic flu or heat wave health consequences, general practitioners and primary health care professionals are often in the front line. National plans should give a clear view of the role and responsibilities of players in the management of these events and the available resources and organisation should be described as well as how effective and rapid dialogue with General Practitioners should be established.

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Checklist on General Practitioners and primary health care professionals:

- [ ] National plans include arrangements, including flexibility and dialogue issue, for general practitioners and primary health care professionals; roles, responsibilities and, if necessary, specific insurance in these circumstances are defined
- [ ] National guidelines for management of different threats are prepared and delivered to health care professionals
- [ ] Curricula, training courses, information and management recommendations are developed and proposed
- [ ] Personal protective equipment (PPE) is available and offered also for these groups

Interoperability

Intra-Community activity leading to:

- [ ] Sharing of guidelines among Member States possibly leading to some best practices
- [ ] EU Agencies (e.g. ECDC) roles as assessing and evaluating of the process are clearly defined

5.2.2. Triage and management of large number of cases

Outcome expected

A large number of cases can either be handled by the health system in emergency rooms or other locations to which patients are directed, or at the site of a possible or real exposure. Triaging and triage procedures are essential to give adequate care to large numbers of people irrespective of the location. Plans for ambulance utilisation will be closely linked to plans for triage and ought to be seen as a block of activities for which the same developments and collaboration are needed. Currently procedures are different in different Member States depending on local traditions and health systems present. The Commission encourages Member States to develop systems of triage and management of large numbers of cases that are based on internationally

recognised requirements, guidelines and procedures. The Commission supports the border areas in developing plans for collaborative management of major events, including hospitals.

Checklist on triage and management of large numbers of cases:
- [ ] Are the following minimum requirements fulfilled?
  - [ ] Triage procedures are established by national disaster and/or emergency medicine specialists or society according to international guidelines
  - [ ] Opportunities exist for the training in these methods for all staff
  - [ ] Hospitals in border areas have developed collaboration with neighbouring health authorities
  - [ ] Patient tracking systems are operational and matched with missing persons search systems
- [ ] Are issues other than public health also covered in case of an incident? Such as the civil protection teams and others?

Intra-Community activity leading to:
- [ ] Supporting border areas in developing plans for collaborative management of major events
- [ ] Coordination discussions on triage systems and treatment protocols

5.2.3 Psycho-social support

Experience from national and international crises has highlighted the fact that the population in general and health care personnel in particular, especially the first responders, suffer significant stress during and after an incident. Through all phases of the crisis situation, i.e. preparation, crisis and aftermath, counselling services should be readily available in order to maintain morale among the population and adequate staffing levels for the health sector.

National resources are needed during a major event and regional plans cover this aspect. Information from national and regional authorities is an important part of this procedure. These activities will be tailored to local situations. Possibilities to share resources across borders are limited in crisis situations. Exercises will be organised on sharing experiences in the planning and actual execution of the plans to provide these resources.

Checklist on psycho-social support: are the following minimum requirements fulfilled?
- [ ] National resources and guidelines are available, including treatment of Post-Traumatic Stress Disorder
- [ ] Guidelines reflect linguistic, cultural, social and religious specificities of population in their reactions to stress
- [ ] Emergency psycho-social support teams are constituted and are operational at a national, regional and/or local level

Intra-Community activity leading to:
- [ ] Support the development of guidelines and share experiences in psycho-social support

5.2.4 Ensuring sufficient critical supplies for the health sector

The national plans for health facilities will ensure that all supplies needed will be available even during a crisis. Types and quantities of supplies should be discussed with local authorities to ensure that the health facilities' needs are included in the general preparedness plans for society as a whole.

The national plans will ensure that the protection equipment, drugs and supplies (also including stockpiling) needed by health facilities will be made available quickly on site and maintained in outreach settings, such as primary care clinics.

The input of public health is needed when discussing preparedness for society at both national and EU level.

Checklist on ensuring sufficient supplies for the health sector: are the following minimum requirements fulfilled?

☐ National guidelines developed on supplies to health facilities in emergencies

☐ General preparedness plans include provision to health facilities during a crisis

☐ Plans address the options for stockpiling extra medical products and supplies, including personal protective equipment, and identify sources for additional supplies including safe distribution of medicinal products and supplies

☐ Plans include a range of essential drugs for disease which will be *additionally* required (antibiotics, cardiovascular drugs etc.) that will be useful also for treatment of *complications*

☐ Plans determine the level of care that could be provided in alternative healthcare facilities and include a contingency plan for providing these alternative facilities with the equipment and supplies required for the level of care to be provided.

☐ General preparedness plans include provision to dispense supplies to outreach settings during a crisis

    ❒ Plans include a strategy for distributing stockpiled medicinal products and supplies and organising dispensing sites.

    ❒ Staff at dispensing sites have received instructions and training

    ❒ The legal aspects for drug dispensing have been properly addressed

    ❒ Accessibility for impaired, homeless and similar groups is included

    ❒ Transportation is arranged for symptomatic persons presenting at dispensing sites to be transported to a treatment centre

    ❒ Feedback on supply availability is organised

Intra-Community activity leading to:

☐ EU Agencies (e.g. ECDC) roles in assessing and evaluating the process are clearly defined

☐ Community mechanism and involvement in the operational issues of stockpile (with health services, EMEA, DG-ENV etc.)

☐ Share experience

5.3 Hospital preparedness

5.3.1 Ensuring general hospital preparedness plans (See also Chapter 7 Management of plans)

National plans will identify and verify the commonly agreed EU minimum requirements for health care facilities. Emergency management for health care facilities includes elements of mitigation, preparedness, response, and recovery. These plans ought to take into account such factors as the appropriateness and adequacy of physical facilities, organisational structures, human resources, and communication systems.

The health care infrastructure has become increasingly dependent on other infrastructure systems, so preparedness within the health care sector must cover those dependencies. The risk and vulnerability analysis should include preparedness for disruption in various infrastructure systems externally and internally (safe hospital aspects) and need to provide services in a timely and 24 hour manner (despite the crisis), including over a prolonged period (business continuity plan: see also §6.3). Especially systems for supply of electric power, water, medical gas and information systems should be taken in account. Other aspects of safe hospitals are preparedness for fire in the hospital and flooding. Special attention should also be paid to the protection of the hospital from contamination by toxic chemicals and the spreading of contagious substances etc by adjusting ventilation systems etc.. Robustness is achieved by including those aspects in the risk and vulnerability analysis, the planning of facilities for medical care, the preparedness plans for external and internal disasters and the activities following disturbances.

The checklist includes questions that stimulate assessment and dialogue with key stakeholders both within the facilities and at the local level and beyond.

Are the following minimum requirements fulfilled?
- ☐ Health care facilities' emergency preparedness plans match national guidelines
- ☐ Disaster committee exists. It is multidisciplinary and includes administrative members.
- ☐ A risk and vulnerability analysis has been conducted for the preparation of the plan
- ☐ The hospital has ongoing, mandatory disaster training programs.
- ☐ Reserve supplies exist for electricity, heating, water and all pharmaceutical and logistical needs
- ☐ Ventilation systems adjusted avoiding contamination from toxic agents (chemicals, biological and radio-nuclear agents etc)
- ☐ The plan provides for clearance of all non-emergency patients and visitors from the emergency department, cancellation of all elective admissions and surgery, determination of rapidly available or open beds
- ☐ The whole hospital and each department have developed standard operating procedures for continuing to provide services in a timely and 24 hour manner (despite the crisis), including over a prolonged period (Business continuity plan, see also 6.3).
- ☐ Medical records and admissions departments are organised to handle an influx of casualties
- ☐ The hospital has designated an Emergency operational centre or a Health event manager who will be responsible for the hospital's responses during the time the plan is activated.
- ☐ Job action sheets or role cards have been prepared for all personnel involved in disaster response.
- ☐ Debriefing of personal
- ☐ Contact with other hospitals
- ☐ List of isolation room/negative pressure room

5.3.2 Treatment capacity

With large numbers of casualties, the treatment capacity of the hospital or health care facility (General Practitioners and primary health care practitioners etc.) will be overwhelmed. With sharply increasing demand, resources and equipment will probably be in short supply. In many countries the main limiting factor will be the availability of personnel.

In small-scale events, routine patient placement procedures will be followed. Advance planning will follow given guidelines, using alternatives when the number of patients presenting to a health care facility is too large; these include cohorting patients presenting with similar syndromes (i.e. admitting groups of affected patients to a designated facility) and setting up alternative treatment modalities. The guidelines will also cover how to reallocate personnel and how big the extra capacity needs to be. Guidelines will exist on setting priorities when deciding which patient groups will be treated in different facilities.

Transfer of patients between Member States has already started both for acute care (mainly burn victims) and for planned procedures. Transferring resources, e.g. using mobile hospitals, has mainly been developed in the military field. It needs to be investigated whether the resources are large and timely enough to actually assist Member States during a major event.

Checklist on treatment capacity: are the following minimum requirements fulfilled?
- ☐ Guidelines for surge capacity established
- ☐ Procedures for patient movements between countries established (with data on the numbers involved) considering financial support by the national health insurance systems
- ☐ Information about treatment capacities offered are shared between Member States
- ☐ National plans include coordination and communication with treatment facilities and have:
  - ❐ identified area treatment centres most likely to care for symptomatic casualties.
  - ❐ identified alternative treatment facilities to care for symptomatic casualties.
  - ❐ a system to allow prompt ongoing reporting of the numbers of diagnosed and suspected cases to the local authority.
  - ❐ progress tracking of reporting systems at treatment centres not currently able to promptly report the ongoing numbers of diagnosed and suspected cases to the local authority.
  - ❐ epidemiologists to assist in the field epidemiology investigation or toxicologists and radiation experts to assist clinicians with the management of casualties
  - ❐ communication devices that could be employed to ensure prompt reporting of case numbers from treatment centres.
  - ❐ identified a coordinator at each treatment centres with whom to communicate.

Intra-Community activity leading to:

☐ Procedures for international transfers established with a focus on acute transfers

5.3.3 Emergency departments

Outcome expected

Emergency Departments in most hospitals might be confronted to a spontaneous influx of victims in case of to a large scale incident (i.e. patients arriving at the emergency department without prior notice) necessitating triage arrangements outside the hospital. The division of work between the emergency departments and the intensive care unit might vary considerably, as will other aspects. National differences are considerable. Important points are sharing the flow of patients and contacting specialists on the agents responsible. Coordination of triage activities as described above is also important.

The possibilities for transferring emergency department resources are of limited value owing to the extensive differences between systems. The flow of individuals between Member States who work in emergency departments in different countries shows that some resources can be transferred. The organisation of national systems will be shared and the feasibility of transferring resources will be identified.

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Checklist on emergency departments:

☐ Are the following minimum requirements fulfilled?
 ❏ Plans exists in emergency departments for the handling of major public health incidents, and are part of or interfaced with crisis and emergency preparedness hospital plans
 ❏ Structures are in place to coordinate emergency department activities with other out-of-hospital activities to control an incident including out-of-hospital activities.
☐ Are issues other than public health also covered in case of an incident, e.g. civil protection teams and others?
☐ Crisis and emergency preparedness plans for emergency departments are required and exist
☐ Crisis and emergency management training for emergency department personnel is proposed
☐ Patient safety and documentation measures (patient wrist bands, matching triage cards etc.) are implemented
☐ Procedures for triage outside the hospital

Interoperability

Intra-Community activity leading to:

☐ Sharing of descriptions of the emergency departments' role in the national systems
☐ Evaluation of possibilities for sharing resources and clinical data in defined scenarios especially in cross border events

5.3.4 Intensive care units

Outcome expected

Intensive Care Units (ICUs) have a clear role in many of the scenarios that a generic preparedness plan ought to cover. They are a limited resource with expensive equipment that requires a significant amount of highly trained and capable staff for each patient. It is clear that the demand will often be much higher than the resources available. Every country needs plans for extending these resources to the maximum and possibly for stocks of additional equipment and pharmaceuticals to be used in an emergency. Even with these possibilities there will be a need for plans to determine priorities between different groups of patients.

National guidelines will define to what extent hospitals may be required to extend their capabilities to treat patients in intensive care and how priorities can be determined. Adapting resources to the management of mass casualties calls for national coordination and international sharing of experiences. Sharing resources has been considered between Member States for smaller numbers of patients in border areas and procedures for these transfers have been established. Mobile resources might be the choice in some settings and the possibilities for sharing them internationally could then be explored.

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Checklist on intensive care units: are the following minimum requirements fulfilled?

- [ ] National guidelines on the role of ICUs in public health emergencies
- [ ] Hospitals in border areas have developed collaboration with neighbouring health authorities

Interoperability

Intra-Community activity leading to:
- [ ] A planning process to identify agreement and conditions with other Member States for sharing resources and staff.
- [ ] Networking among ICUs in the field of mass casualties and containment measures also including the exchange of clinical data.

5.4   Fatality management

Outcome expected

Fatality management in the event of multiple casualty incidents calls for consideration of several aspects. Multi-sectoral (health, law enforcement, civil protection, forensic agencies) and multi-cultural approaches are mandatory. Plans will ensure that extra resources can be put in place when the number of cases overwhelms the system. The agents causing fatalities may demand special handling of bodies to protect personnel and ensure that the agent is not spread further in the environment. Finally nationals from many different countries might be involved, and therefore each national plan will cover the management of casualties according to specificities of other Member States' legislation.

These activities and the relevant formalities will be coordinated at EU level.

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Checklist on management of fatalities:

Are the following minimum requirements fulfilled?
- [ ] National guidelines on the management on large numbers of fatalities exist and take account, where possible, of religious and other cultural funeral practices
- [ ] National guidelines on transportation of foreign citizens to their native countries
- [ ] National plans address post-mortem care and informing pathology departments and clinical laboratories on submitting specimens for examination or disposal, and use of personal protective equipment and standards
- [ ] Useful information obtained by forensic pathologists is transmitted to relevant authorities also including health authorities
- [ ] Guidelines exist on handling fatalities from transmissible agents

Interoperability

Intra-Community activity leading to:
- [ ] Multi-sectoral approach

5.5   Special aspects of biological events

In case of a biological event there are specific needs. These are, apart from expert advice, contact tracing, infection control and personal protective measures, and isolation procedures.

5.5.1 Contact tracing

Outcome expected

Contact tracing procedures are an important connection between health care activities and surveillance. They involve a wide range of activities and actors depending on the scenario and the agents involved. They will aim both to find the cause of the incident and to minimise the future effects. However contact tracing might be a too complicated procedure and it should be adjusted so it becomes a reasonable action. The Member States have wide-ranging experience in contact tracing and the exact procedures will be heavily dependent on national systems, laws and respect of personal data protection. The international spread of disease adds an extra level of complication when experience already exists for some diseases.

The activities in international events will be coordinated, the differences between systems will be understood and acknowledged, and definitions will have been agreed for the contacts to be traced. Procedures will enable

contact tracing among people travelling between countries and continents and enhance the EU's preparedness.

Checklist on contact tracing:
- [ ] Are the following minimum requirements fulfilled?
  - ❐ Incidents where contact tracing should be done are defined
  - ❐ Responsibilities are defined
  - ❐ Process for information flow within the MS defined
  - ❐ International contacts established for international contact tracing
- [ ] Is balance between goals and possible saturation of the process taken in account?
- [ ] Are issues other than public health also covered in case of an incident, e.g. police and others?

Interoperability

Intra-Community activity leading to:
- [ ] Procedures for international contact tracing established in respect of data protection rules and regulations.
- [ ] Rapid coordination of EU-wide tracing established (EWRS, ECDC)

5.5.2 Infection control / personal protective measures

Outcome expected

With many of the agents to consider when planning for a public health event, there are additional concerns about personal protective measures and infection control. Special precautions may be needed to reduce the likelihood of transmission and for certain diseases additional isolation requirements may be needed. Knowledge and evaluation of additional procedures will be collected and further developed at EU level. The use of the methods developed will be adapted to national settings. These methods might in some instances mean using specialised equipment or pharmaceuticals for pre- and post-exposure prophylaxis. Here national guidelines and resources will be created for storing the equipment and developing training programmes on their use. For major events requiring mutual support, international agreements on the use of such equipment will be proposed.

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Checklist on infection control / personal protective measures: are the following minimum requirements fulfilled?
- [ ] National guidelines on the infection control and personal protective equipment in public health events involving specific agents, for both hospital and primary health care practitioners (GPs and paramedics/EMS)
- [ ] National, regional or local stockpiles and/or distribution system constituted and organised for personal protective equipment
- [ ] Waste management (gloves, masks etc)

Interoperability

Intra-Community activity leading to:
- [ ] A planning process to identify agreement and conditions with other Member States for sharing resources and staff.
- [ ] Networking among Member States on development of procedures and guidelines for specific agents
- [ ] ECDC' role as coordinator and evaluator of the process clearly defined; develop agreed list of pre-and post-exposure prophylaxis measures
- [ ] Standards and guidelines for infection control practitioners

5.5.3 Isolation/Quarantine procedures

Outcome expected

For a number of agents considered as public health hazards, isolation of patients is an important countermeasure as well as quarantine measures. It limits the spread of disease to personnel and other patients. For some diseases, isolation procedures have already been agreed, defining cases to be isolated and when they can be released; they need to be developed for others. In some areas specialised resources will be needed and national guidelines will be drafted on the amount required. For new diseases, procedures will be in place

to quickly develop guidelines based on a common consensus at EU level, taking into account WHO/IHR, even if some national adaptations may be necessary.

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Checklist on isolation procedures: are the following minimum requirements fulfilled?
- [ ] National guidelines available taking into account the legal framework
- [ ] Data available on national resources for isolation/quarantine

Interoperability

Intra-Community activity leading to:
- [ ] Shared guidelines for isolation procedures
- [ ] Support from projects to allow sharing and developing of guidelines

5.6 Special aspects of chemical events

In chemical events there are specific needs: detection of the agent on exposed individuals, decontamination of patients, personal protective equipment, expert advice from Poisons Centres and other relevant bodies, and protection of health care facilities from contamination of chemical clouds and from being secondary contaminated by victims/patients (see 5.3 Hospital preparedness regarding safe hospital aspects). Attention should also be paid to environmental and food contamination handled by other sectors (see also 6. Intersectoral collaboration).

5.6.1 Detection of the agent on exposed individuals

Outcome expected

It might be necessary to be able to detect whether a person has been exposed and whether decontamination or other action is necessary. Procedures to determine the need for detection/identification of the agent on exposed individuals and to take the requisite action will be developed by Member States. Sharing of information about criteria and detection/identification procedures between Member States would strengthen the possibilities for cross-border sharing of resources for detecting the agent on exposed individuals.

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Checklist on detection of the agent on exposed individuals:
- [ ] Are the following minimum requirements fulfilled?
    - [ ] National plans include guidelines and procedures for detecting the agent on exposed individuals in pre-hospital and hospital settings
    - [ ] National plans include guidelines and procedures for detecting the agent on ambulance and hospital staff, ambulance vehicles and health care facilities
    - [ ] The procedures are developed for a wide range of threats (e.g. CBRN)
    - [ ] Timeliness and other aspects of preparedness are tested in regular exercises
    - [ ] Information on the capacity for detection is aggregated at national or regional level
- [ ] Who are the competent authorities / structures?
- [ ] Are issues other than public health also covered in case of an incident, e.g. rescue services (including fire-brigade) and police sampling teams?

Interoperability

Intra-Community activity leading to:
- [ ] Sharing of guidelines and detection methods among Member States, possibly leading to some best practices
- [ ] Sharing of validation data on detection methods
- [ ] Evaluation of possibilities for sharing resources across borders
- [ ] Relevant EU Agency's role in assessing and evaluating the process is clearly defined
- [ ] Relevant EU Agencies need information for possible coordination of activities

5.6.2 Decontamination of patients

Decontamination of exposed individuals prior to receiving them in the health care facility may be necessary to ensure the safety of patients and staff while providing care. Procedures to determine the need for decontamination and capabilities to take the requisite action will be developed by Member States, sharing of information about criteria and decontamination procedures between Member States would strengthen the possibilities for cross-border sharing of decontamination resources. Close collaboration with sectors responsible for environmental decontamination should be established.

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Checklist on decontamination of patients:
- [ ] Are the following minimum requirements fulfilled?
    - ❒ National plans include guidelines and procedures for
        - o decontamination of exposed individuals in pre-hospital and hospital settings
        - o decontamination of ambulance and hospital staff, ambulance vehicles and health care facilities

    - ❒ The procedures are developed for a wide range of threats (e.g. CBRN)
    - ❒ Timeliness and other aspects of the preparedness is tested in regular exercises
    - ❒ Information on the capacity for decontamination is aggregated at national or regional level
- [ ] Who are the competent authorities / structures and how is collaboration guaranteed?
- [ ] Are issues other than public health also covered in case of an incident, e.g. sampling teams and others?

Interoperability

Intra-Community activity leading to:
- [ ] Sharing of guidelines and decontamination methods among Member States, possibly leading to some best practices
- [ ] Sharing of validation data on decontamination methods
- [ ] Evaluation of the possibilities for sharing resources across borders
- [ ] Relevant EU authorities roles as assessing and evaluating of the process are clearly defined

5.6.3 Personal Protective Equipment (PPE)

Outcome expected

In the event especially of chemical (and biological or radio-nuclear) incidents there is a need for the first responder and health care providers to protect themselves from being exposed. This may be necessary on-site, during transport to or at the health care facility before the patient has been properly decontaminated. Procedures to protect personnel will be developed by Member States. Sharing between Member States of information about equipment and criteria for its use will increase the possibilities for sharing resources across borders.

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Checklist on PPE:
- [ ] Are the following minimum requirements fulfilled?
    - ❒ National plans include guidelines on personal protective equipment
    - ❒ National plans include guidelines and procedures on the use of personal protective equipment by ambulance and hospital staff
    - ❒ The procedures are developed for a wide range of threats (e.g. CBRN)
    - ❒ Timeliness and other aspects of preparedness are tested in regular exercises
    - ❒ Information on the capacity and availability of personal protective equipment is aggregated at national or regional level
- [ ] Who are the competent authorities / structures?
- [ ] Are issues other than public health also covered in case of an incident, e.g. police, rescue services etc?

Interoperability

Intra-Community activity leading to:
- [ ] Sharing of guidelines on standards and validation data for personal protective equipment among Member States possibly leading to some best practices
- [ ] Evaluation of the possibilities for sharing resources across borders

☐ Relevant EU authorities roles as assessing and evaluating of the process are clearly defined
☐ Waste management (gloves, masks etc)

5.6.4 Scientific/evidence-based advice from Poisons Centres and other relevant bodies

Input of expertise from Poisons (Information) Centres and other relevant bodies improves the response and treatment capacity in case of chemical incidents. Poisons Centres can provide specific expertise to first line responders and to other emergency departments, ICUs etc. and can assist in additional antidote procurement.

☐ Identification of expert bodies for scientific/evidence-based advice
    ❐ EU Agencies
    ❐ Poisons Centres
    ❐ International Programme on Chemical Safety (IPCS) and its collaborating agents/institutions/clearinghouse mechanisms
    ❐ European Chemical Industry Council (CEFIC)
    ❐ Universities, National and International Agencies with specific knowledge on chemicals
    ❐ Civil Protection structures
☐ Checklist on Poisons Centres: are the following minimum requirements fulfilled?
    ❐ Plans include poison centres for providing expertise both during the response (crisis) phase and risk assessment in the planning phase.
    ❐ Poisons centres exchange information with the health event manager and the public health sector in general
    ❐ Poisons centres have the ability to collect syndromic data and collaborate with relevant structures in the public health sector to identify and monitor health threats.

Intra-Community activity leading to:
☐ A planning process to identify agreement and conditions with other Member States for sharing resources, knowledge and staff.
☐ Networking among Member States in development of procedures and guidelines for specific agents

5.7 Special aspects of radio-nuclear events

In a radio-nuclear event there are specific needs. These are: expert advice, equipment for detection/identification of radio-nuclear agents, decontamination of patients, personal protective equipment, knowledge and capabilities for treating radiation sickness. Close collaboration and cooperation with other sectors are important. Attention should also be paid to environmental and food contamination handled by other sectors (see also 6. Intersectoral collaboration) and safe hospital aspects (see 5.3 Hospital preparedness).

5.7.1 Detection of the agent on exposed individuals

It might be necessary to be able to detect whether a person has been exposed and whether decontamination is necessary. Procedures to determine the need for detection/identification of the agent on exposed individuals and to take the requisite action will be developed by Member States. Sharing of the information about criteria and detection/identification procedures between Member States would strengthen the possibilities for cross-border sharing of resources for detecting the agent on exposed individuals.

Checklist on detection of the agent on exposed individuals:
☐ Are the following minimum requirements fulfilled?
    ❐ National plans include guidelines and procedures for detection of the agent

         ○   on exposed individuals in pre-hospital and hospital settings
         ○   on ambulance and hospital staff, ambulance vehicles and health care facilities

❑ Chosen methods of detection are validated
❑ The procedures are developed for a wide range of threats (e.g. CBRN)
❑ Timeliness and other aspects of preparedness are tested in regular exercises
❑ Information on the capacity for detection is aggregated at national or regional level
☐ Who are the competent authorities / structures?
☐ Are issues other than public health also covered in case of an incident, e.g. rescue services (including fire-brigade) and police sampling teams?

Interoperability

Intra-Community activity leading to:
☐ Sharing of guidelines and detection methods among Member States, possibly leading to some best practices
☐ Sharing of validation data on detection methods
☐ Evaluation of the possibilities for sharing resources across borders
☐ Relevant EU authorities roles in assessing and evaluating the process are clearly defined
☐ Relevant EU authorities need information for possible coordination of activities

5.7.2 Decontamination of patients

Outcome expected

Decontamination of exposed individuals prior to receiving them in the health care facility may be necessary to ensure the safety of patients and staff while providing care. Procedures to determine the need for decontamination and capabilities to carry out the requisite measures will be developed by Member States. sharing of the information about criteria and decontamination procedures between Member States would strengthen the possibilities for sharing decontamination resources across borders.

MS, Commission and Agencies

Checklist on decontamination of patients:
☐ Are the following minimum requirements fulfilled?
❑ National plans include guidelines and procedures for decontamination of exposed individuals in pre-hospital and hospital settings
❑ National plans include guidelines and procedures for decontamination of ambulance and hospital staff, ambulance vehicles and health care facilities
❑ The procedures are developed for a wide range of threats (e.g. CBRN)
❑ Timeliness and other aspects of preparedness are tested in regular exercises
❑ Information on the capacity for decontamination is aggregated at national or regional level
☐ Who are the competent authorities / structures?
☐ Are issues other than public health also covered in case of an incident, e.g. sampling teams and others?

Interoperability

Intra-Community activity leading to:
☐ Sharing of guidelines and decontamination methods among Member States, possibly leading to some best practices
☐ Sharing of validation data on decontamination methods
☐ Evaluation of the possibilities for sharing resources across borders
☐ Relevant EU authorities roles as assessing and evaluating of the process are clearly defined

5.7.3 Personal protective equipment (PPE)

Outcome expected

Especially in chemical (and radio-nuclear) events there is a need for the first responder and health care providers to protect themselves from being exposed. This may be necessary on-site, during transport to or at the health care facility before the patient has been properly decontaminated. Procedures to protect personnel will be developed by Member States. Sharing between Member States of information about equipment and the criteria for its use would strengthen the possibilities for sharing resources across borders.

Checklist on:

☐ Are the following minimum requirements fulfilled?
- ☐ National plans include guidelines on personal protective equipment
- ☐ National plans include guidelines and procedures for use of personal protective equipment by ambulance and hospital staff
- ☐ The procedures are developed for a wide range of threats (e.g. CBRN)
- ☐ Timeliness and other aspects of preparedness are tested in regular exercises
- ☐ Information on the capacity and availability of personal protective equipment is aggregated at national or regional level

☐ Who are the competent authorities / structures?

☐ Are issues other than public health also covered in case of an incident, e.g. police, rescue services etc?

Interoperability

Intra-Community activity leading to:

☐ Sharing of guidelines on standards and validation data for personal protective equipment among Member States, possibly leading to some best practices

☐ Evaluation of the possibilities for sharing resources across borders

☐ Relevant EU authorities roles as assessing and evaluating of the process are clearly defined

☐ Waste management (gloves, masks etc).

5.7.4 Radiation sickness

Individuals severely exposed to radiation may develop radiation sickness, which is a rare condition. There is a need for advice from experts on treating these individuals and a need to protect these individuals from potential infections.

MS, Commission and Agencies

Checklist on isolation of patients: are the following minimum requirements fulfilled?

☐ National plans include availability of expertise on treating radiation sickness.

☐ National plans include guidelines for managing a large number of individuals suffering from radiation sickness including the need for isolation of and specific drugs (e.g. cytokines) for a large number of individuals.

Interoperability

Intra-Community activity leading to:

☐ Networking of expertise on radiation sickness

5.8   *Special aspects of climate change events*

Extreme weather situations should be taken into consideration in the crisis management preparedness plans of the health care sector in connection with risk and vulnerability analysis. Close collaboration with other sectors and actors are important. Education and training should be provided to health care personnel. Identification and appropriate support must be secured for patients given medical treatment outside hospitals, as well as preparedness to give medical support to other vulnerable groups. Preparedness must include robustness of hospital facilities as well as supply with essential goods, since extreme weather situations can affect critical infrastructure. The capacity of taking care of a large number of dead people is necessary, mortuaries should be extendable, if needed, by the use of refrigerated containers or in other ways and close cooperation with other sectors might be considered. Evacuation plans for hospitals and other medical facilities must be prepared.

6 Intersectoral collaboration

This section briefly describes the emergency and intervention planning that should exist in each Member State in order to deal with a major public health event. One important issue in intersectoral collaboration is to use already existing models avoiding parallel structures or a doubling of efforts.

It also describes the bridging processes with other disciplines/sectors

- to deal with health event management issues beyond the health field, in order to prepare those concerned to assist their public health partners;
- to prepare the public health partners for mitigation issues usually dealt by other departments.

Good preparedness planning will establish (public) health recommendations allowing vital civil functions to be implemented, and to recover, in case of a major public health event.

One area especially addressed is the relation between law enforcement and health, and there is a special section on Bridging Security and Health.

Annex 5 summarizes an inventory of the European Community capacity in crisis management done in 2009. It illustrates the complexity of the topic within the European Commission and the importance of intersectoral collaboration.

6.1. Emergency and Intervention Planning

Outcome expected

National emergency and intervention plans will clearly describe the procedures and criteria to immediately create secured zones (area cordoning), according to the type of health threat. These zones are meant to (i) limit the extent of the threat; (ii) allow rescue of the victims by competent staff; (iii) protect rescue staff; (iv) allow appropriate countermeasures to protect the surrounding populations; (v) allow appropriate control of environmental impact; (vi) allow law enforcement interventions; (vii) prevent interference by the media.

SOPs will clearly describe which zone is accessible to which staff, under which conditions. All rescue staff will be trained and familiar with these procedures. A system for easy identification of rescue staff (uniforms, coloured helmets, jackets) will be in place. The interaction with other actors in decontamination procedures are defined.

Member States

The emergency and intervention national plan includes:
- ☐ Clear allocation of tasks between the rescue disciplines/sectors (medical; human and environmental decontamination;, waste management; disposal intervention)
- ☐ Clear SOPs for definition of zones (cordoning, access for rescue staff and posts (Operational Command Post, Decontamination Units, Advanced Medical Post, Field Crisis Centre, Communications and Logistical Support). Access to these zones is denied to populations and media. All the zones may request law enforcement measures and environmental countermeasures.
- ☐ Clear SOPs between rescue disciplines/sectors (common understanding of codes and language, approved command procedures, coordination, common or compatible communication systems)
- ☐ Emergency plans of health care institutions to be activated according to criteria and thresholds which are defined by national legislation
- ☐ SOPs allowing up-scaling / down-scaling in resources allocation
- ☐ Clear mandate for requisition of property (land, vehicles, labs, hospitals, pharmaceuticals) with clear legal and financial implications
- ☐ Implementation of the IHR (2005) with a National IHR Focal Point function to connect with WHO
- ☐ Implementation of the EWRS Focal Point function to connect with the Commission

Agencies

- ☐ Scientific advice and threat assessment

European Commission

Checklist for management of incidents with public health consequences:

- ☐ List, inventory of surge resources in terms of personnel and material for response / rescue management;
- ☐ SOPS for up-scaling and surge capacity;
- ☐ Procedures for coordination of assistance between Member States.

Interoperability

Operational links for intra-Community facilitation of operations:

- ☐ Cross-border coordination agreements and exercises involving different disciplines/sectors
- ☐ Workshops for planners

6.2 Bridging between disciplines/sectors

Outcome expected

Preparedness includes clear identification of all sectors and stakeholders involved in the management of the major health threat.

Agreements, Rules of Procedure or other regulations will be in place between the relevant stakeholders at all political levels, updated bridging procedures will be in place, and staff will be trained to implement them.

Responsibilities of the Commission General Directorates and Agencies should be clearly defined. Within the Commission and in some Member states health matters related to the pre-hospital setting are handled by Civil Protection

Point of Entry national authorities will have adequate traceability measures/agreements and a legal framework in place for obtaining passenger information from the airline companies that have regular 'slots' in airports and from travel agencies, tour operators and cruise-ship companies.

National plans will include providing generic information to travellers before and during travel (i.e. posters and folders at the Point of Entry, information on passenger-checked baggage etc.) and will pass this information to the airline companies, travel agencies, tour operators and cruise-ship companies (passenger briefing at ticket purchase).

Member States

Identify and implement bridging between sectors, beyond the health field:

- ☐ Rescue disciplines: Fire Brigade, Civil Protection, Police, Disaster Victim Identification (DVI)
- ☐ Transportation sector, travel advice and point-of-entry measures:
  - ❒ SOPs and legal framework for passenger tracing
    - o for Point of Entry authorities
    - o for transport companies
  - ❒ SOPS for passenger information at Points of Entry
  - ❒ Operational network for timely transmission of information to relevant actors
  - ❒ List of local, regional, national and international contact points;
  - ❒ Travel advice and point-of-entry measures are part of up-scaling process in national crisis plans
  - ❒ Scientific advice available from public health experts (national, international) and back-up by national public health authorities
  - ❒ Conformity with legislation on points-of-entry (IHR 2005 and other) and data protection

Agencies

- ☐ Identify EU Agencies outside the health sector
- ☐ Collaboration with the Community network
- ☐ Procedure to assist, on request, MS in passenger tracing
- ☐ Legal framework for transmission of relevant data to relevant actors in passenger tracing procedures
- ☐ Secure tool and SOPs for transmission of data in passenger tracing procedures
- ☐ List of local, regional, national and international contact points;
- ☐ Scientific advice / risk assessment on transportation of dangerous agents

☐ Support in identifying the most appropriate laboratory in EU for desired purpose
☐ Networking of laboratories in EU

European Commission

Operational links for intra-Community facilitation of operations:
☐ Assist Member States in applying traceability measures
☐ Procedures are set up with the Member States' national authorities and stakeholders in the travel area
☐ European legal framework for transmission of relevant data to relevant actors in passenger tracing procedures
☐ <u>Secure</u> tool for coordination of measures in passenger tracing procedures on a large scale
☐ <u>List of local, regional, national and international contact points</u>
☐ Coordination of measures implemented at Points of Entry
☐ Collaboration with the Communicators Network

Interoperability

☐ Cooperation procedures between Commission services and the competent national authorities in the Member States
☐ European legal framework for transmission of data to relevant actors in a passenger tracing procedure
☐ EU platform for dialogue between health and private companies in the travel sector (airports, airline companies, travel agencies, other stakeholders and services involved),
☐ Implementation of the IHR (2005)
☐ Collaboration between European Authorities concerned (Europol, Health, Transport, Justice, Economy)
☐ Discussion at international level: IATA, WHO, among others

6.3 Bridging Security and Health

Outcome expected

Member States will have installed coordination and communication mechanisms between the national health, law enforcement and civil protection authorities in order to enforce public health measures. Each competent authority will keep its counterparts in the Member States updated in liaison with the Commission.

Member States will include epidemiological and law enforcement investigations in their plans.

The Commission, ECDC and EUROPOL will support the cooperation initiative since many of the countermeasures will involve law enforcement and civil protection intervention. The command and control structures at national level, and the liaison and control structures at EU level, will support this role. For further information see the Commission staff working document of 17/06/2009 SEC(2009) 874

(http://s-sanco-europa/health/ph_threats/com/preparedness/prephome/cbrn_en.htm)

Member States

Checklist for incidents with public health consequences:
☐ In the *pre-incident phase,* there are the preliminary practices, criteria and conditions necessary to allow interaction between law enforcement and public health bodies on:
  ❏ Development of joint working relationships before incidents occur
  ❏ Management of joint investigations
  ❏ Establishment of synergy between law enforcement and public health investigations
☐ Risk and threat assessment, information exchange and joint working is organised ahead of an event
  ❏ Definition of threat and risk and principles for applying risk and threat assessment
  ❏ Interaction between public health and law enforcement on risk and threat
  ❏ Obstacles/solutions to information exchange
  ❏ Developing joint working relationships and managing joint investigations
☐ Personnel security & management
  ❏ Responsibilities of employers to monitor and support staff in protecting access to hazardous materials and to comply with increased security measures to protect hazardous materials and information assets.
  ❏ Vetting of staff and control of visitors to sensitive sites
☐ Facility security & management (of biological material)
  ❏ Understanding of the different perspectives held by public health and law enforcement authorities concerning the public risk that may arise by the misuse of biological materials commonly stored and used in public, educational and industrial facilities
  ❏ Establishment of a common understanding on reasonable levels of security that can be enhanced in response to changing threat levels

- ❏ The development of joint work programmes on the development of security for biological agents in particular
- ☐ Transportation security, material control and accountability
  - ❏ Preparing samples to be transported for further analysis
  - ❏ Definition of requirements to keep materials safe in transit
  - ❏ The varying international regulations promulgated separately for biological materials in transit
  - ❏ Training of staff involved in the transit of hazardous materials
  - ❏ Tracking and safeguarding materials in transit, ensuring the legitimacy of consignees and ascertaining the correct reception of forwarded samples
- ☐ Joint risk and threat assessment of suspicious incidents
  - ❏ Recognition of incidents by public health authorities that should be referred to law enforcement and other competent authorities
  - ❏ Recognition of incidents by law enforcement and other competent authorities that should be referred to public health authorities
- ☐ Personal protective equipment (PPE)
  - ❏ Assessment of hazard and provision of appropriate personal protective equipment (PPE)
  - ❏ Restriction on communication
  - ❏ Resilience and degradation of physiological performance and of equipment
  - ❏ Standardisation of PPE ensembles (interoperability) versus need for differing standards of PPE to enable differing working practices
  - ❏ Disposal of PPE
  - ❏ Verification of PPE protection and reassurance of personnel
  - ❏ Availability of decontamination facilities for operational staff of competent authorities/public health and law enforcement
- ☐ Definition and enforcement of area security and hot/safety zones for the purposes of an investigation
  - ❏ Definition of safety zones
  - ❏ Legislation to support incident working
  - ❏ Providing safe systems of working for investigators
  - ❏ Ensuring enforcement of cordons and site/public safety
  - ❏ Management and authority to invoke safety and control measures
- ☐ Laboratory issues: Maintenance of chain of evidence
  - ❏ Identification and classification of hazards
  - ❏ Principles guiding the collection of samples for forensic purposes (who collects what)
  - ❏ Laboratory pathways
- ☐ Laboratory issues — designation, accreditation, quality assurance and forensic requirements for diagnostics and confirmation of diagnostics
  - ❏ Understanding of the different role and processes utilised by diagnostic, exclusion and confirmatory laboratories
  - ❏ Identifying appropriate specialist and reference laboratories
  - ❏ Utilising laboratories not normally accredited to provide forensic services
  - ❏ Understanding the different processes and levels of proof used in developing clinical suspicion of a disease, obtaining clinical confirmation and providing satisfactory proof of disease to evidential standards
  - ❏ Preserving of evidential samples
  - ❏ Disposing of hazardous evidential waste
- ☐ Media and public relations
  - ❏ Informing the public and maintaining their confidence and trust by ensuring early announcing, transparency and understanding of the public's needs and perception of risks
  - ❏ Preventing panic and public order disruption
  - ❏ Public reassurance, vigilance and awareness
  - ❏ Ensure that the public acts in a way that mitigates and minimises the impact of an incident
  - ❏ Ensuring that the public assists in prevention and detection of crime
  - ❏ Enabling the earliest possible return to normality
  - ❏ Ensure media's right and duty to inform the public
- ☐ Training and exercises
  - ❏ Regularity and intensity of training
  - ❏ Different levels of management may require different training
  - ❏ Inter-agency versus intra-agency training
  - ❏ First-line officials need hands-on training
  - ❏ Awareness of allied technical and professional persons needs to be stressed

- ☐ Available EU and relevant international alerting and medical intelligence tools and their usage
  - ❏ Ensure that the appropriate people have access to the available public and restricted EU information resources;
  - ❏ Ensure their ability to analyse the information gained from these sources in terms of their own national needs and vulnerabilities.
  - ❏ National dissemination and alerting systems must be in place to ensure that the intelligence derived can be acted upon
  - ❏ Public health should work with law enforcement in formal cooperation, so the different analytical skills of the separate organisations can be pooled to maximise the amount of information that can be gathered and the quality of the analyses derived.
  - ❏ Public health agencies involved in such collaborations need to ensure that their liaison staff observe agreed security measures for the safe handling of sensitive information, have appropriate formal security clearance and provide quality risk assessments to law enforcement.

6.4 Business continuity planning (BCP)

Outcome expected

Ensuring that essential services can stay in business in the event of a major health emergency with a staff reduction to around 30 per cent. Critical structures in the health sector and beyond will be identified in each Member State. The planning ought to be undertaken by the services themselves, as part of their existing emergency plans, in collaboration with the relevant authorities

Member States

- ☐ identify all critical services and structures
- ☐ have a business continuity plan (BCP) for major public health crises defining the role of public health authorities and institutes, and identifying critical resources

Agencies

- ☐ Procedure to assist, on request, Member States in implementing BCP
- ☐ Scientific advice / risk assessment for critical structures/services

European Commission

Community activity leading to:
- ☐ Coordination of countermeasures for BCP

Interoperability

Intra-Community activity leading to:
- ☐ Agreement on critical services to implement BCP
- ☐ Managing critical normal business as efficiently as possible with a staff reduction to around 30 per cent

6.5 Transport of samples

Outcome expected

Member States will specify in their plans how to transport dangerous pathogens inside and if needed outside the country. Agreements will exist between laboratories approved by the competent authority for this transport. Customs will be informed about eligible transport between designated national laboratories for public health emergencies.

The relevant Community legislation will cover the transport of patient and environmental samples in public health emergencies. Community and national legislation on the transport of dangerous substances will be regularly adapted to the evolving scientific and technological circumstances notified by international organisations.

There will be legislation or guidelines on protective measures.

MS, Agencies and European Commission

Checklist for incidents with public health consequences:

☐ Transport safety measures (according to international standards)
  ❒ Civil Protection or accredited/authorised transportation companies
  ❒ Trained staff and relevant equipment
  ❒ Lists of contacts and SOPs are developed according to type of substance transported.
☐ Agreements between authorities, laboratories and transportation companies
☐ Legislation takes into account the emergency situation:
  ❒ Customs
  ❒ Transport
  ❒ Designated laboratories

Interoperability

Operational links for intra-Community transport, requiring
☐ Trusted carrier has been identified for possible transport needs
☐ Carrier has tested that consignments are actually brought to destination
☐ Proper pick-up is organised at destination
☐ Agreement is in place for testing, payment and any confidentiality issues
☐ Relevant Community legislation is implemented on transport of patient and environmental samples in public health emergencies
☐ Transport of dangerous substances
☐ Legislation or guidelines on protective measures is in place at national level
☐ Relevant international agreements are implemented on transport of patient and environmental samples in public health emergencies (e.g. IATA, WHO)

6.6 Ethical implications of countermeasures

Outcome expected

Ethical issues are closely related to the legal issues as mentioned above and are part of the framework needed to assess the cultural acceptability of measures such as quarantine and selective immunisation of pre-defined risk groups. Ethical aspects arise when there is a shortage of means for the whole population and only selected groups can get access to available resources.

National plans will include a guideline ethical framework for responses to public health crises. National plans will include a verification process to ensure that the ethical aspects of policy decisions during an outbreak provide a balance between individual rights and population rights.

MS, Commission and Agencies

Checklist on ethical implications of countermeasures
☐ National plans address
  ❒ ethical questions related to limiting the availability of a scarce resource, such as rationed diagnostic laboratory tests, vaccines, anti-viral drugs or other medicinal products and equipment
  ❒ questions related to compulsory vaccination for primary care providers, healthcare workers and essential community service providers
  ❒ issues related to limiting personal freedom, such as may occur with isolation and quarantine
  ❒ establishment of an ethical framework for research, especially when this involves human subjects.

Interoperability

Intra-Community activity leading to:

☐ Platform between Commission services and relevant stakeholders:

    ☐ To identify issues with ethical implications

    ☐ To provide framework for assessing inclusion of ethical aspects

    ☐ To issue recommendations.

7 Management of plans

This section describes the processes required to deal with the established plans, allowing careful and mutual sharing, evaluation, training, distribution and testing.

7.1 Follow-up and verification of plans

Interoperability

This suggested planning process is to be followed by action to ensure that the necessary structures, legislation, arrangements and resources are in place. It ought to be clear who holds responsibility for the plan and a mechanism and frequency for reviewing and updating the plan should be agreed. Distribution lists should be kept up to date. This Community planning may provide a template for event-specific plans or for developing and updating national/regional plans, which obviously should not be in conflict. Therefore plans should refer to each other. The people responsible for this planning should oversee and ensure the existence of national plans and should be involved in the development or updating of such plans. Therefore it will be advisable for all national plans to be shared and validated through an agreed mechanism.

The level of scrutiny of plans in the EU requires careful consideration, as it is politically sensitive.

MS, Commission and Agencies

Checklist on follow-up of plans: are the following minimum requirements in place?
- ☐ Public health authorities or competent authority take action to ensure that the necessary structures, legislation, arrangements and resources for national / regional and local planning are in place
- ☐ Responsibility for the plan and a mechanism and frequency for reviews are agreed
- ☐ The plans include a distribution list and keep it up-to-date
- ☐ Public health authorities or competent authorities present the various plans in a peer setting to ensure that national/regional/local plans are coordinated at different levels
- ☐ Agreed mechanism for analysing, comparing and evaluating national plans

Interoperability

Intra-Community activity leading to:
- ☐ Public health authorities or competent authorities share the plans and present the various plans in a peer setting to ensure that national/regional/local plans are coordinated in the different Member States.
- ☐ Inventory and database for national plans is provided
- ☐ Member States agree on a mechanism for analysing, comparing, evaluating and checking mutual compatibility of national plans

7.2 Training

Outcome expected

At EU level the most appropriate concept for training may be to 'train-the-trainers' to help relevant courses at national level. This would help to fill possible gaps that may exist in training material (courses, slides, case studies) and/or trainers. Procedures and structures will therefore be developed and training material shared, a 'directory of trainers' will exist and courses will be available also to 'non-nationals'.

MS, Commission and Agencies

Checklist on training: are the following minimum requirements in place?
- ☐ Guidelines for training of all personnel involved, including management
- ☐ Plans include relevant training programmes for all levels involved

Interoperability

Intra-Community activity leading to:

- ☐ 'Train-the-trainers' modules to support relevant courses at national level and provide training material (courses, slides, case studies)
- ☐ Procedures and structures to develop training material and a 'directory of trainers' available to assist with training materials and course development
- ☐ Enhance the collaboration between the MS. Exchange of training modules, experiences etc

7.3 Testing and evaluation of plans including exercises

Outcome expected

After finalising the structure and content of any preparedness plan, an important step is to test and evaluate the plan. Exercises will be arranged regularly to verify the coherence and feasibility of the planning.

A first exercise would be to run through the plan systematically 'rehearsing' recent experiences with various key players that were involved.

Another step may be to go through the plan with the key players and simulate various scenarios. Exercises should be undertaken at national/regional/local level to test plans. Evaluation and lessons learned are important tools to improve plans.

MS, Commission and Agencies

Checklist on testing and evaluation of plans
- ☐ Guidelines for exercises
- ☐ Plans include exercise processes and lessons learned
- ☐ Exercise(s) that allow(s) players involved to test and evaluate the proposed plans

Interoperability

Intra-Community activity leading to:
- ☐ Regular EU-wide testing of scenarios
- ☐ As many players (not only in the medical field) as possible should be identified in the plan (local, regional, national, EU level, global partners)
- ☐ Sharing of lessons learned
- ☐ Develop opportunities to establish good practice and guidelines in the Community

7.4 Response time objectives

Outcome expected

Response time objectives mean suggested time frames for selected critical response functions or tasks. They form part of the objectives for a response capability once established. They should be used as evaluation criteria in exercises.

MS, Commission and Agencies

Checklist on response time objectives: are the following minimum requirements in place?
- ☐ Plans include proper indicators and response time objectives, including testing response time on:
  - ❒ establishing emergency management operations
  - ❒ Emergency Operations Facility (EOF) activation
  - ❒ EOF fully functional (all organisations represented)
  - ❒ notify local, national and EU partners
  - ❒ initiate mitigation actions and provide technical assistance to the on-site responders
  - ❒ cordoning off an area
  - ❒ recommend urgent protective actions for the public
  - ❒ preparing initial patient care at emergency department

☐   Response time is tested at different levels

7.5 Coverage objectives

Outcome expected

Coverage objectives for selected critical response functions or tasks help to verify the cross-department implementation of plans. They form part of the objectives for a response capability, once established, and should be used as evaluation criteria. The coverage of specific professional target groups in national plans for specific illnesses (e.g. influenza vaccine, availability of collective and Personal Protective Equipment, etc.) allows plan managers to evaluate how well plans have been implemented.

MS, Commission and Agencies

Checklist on coverage objectives: are the following minimum requirements in place?
☐   Plans include proper indicators and coverage objectives, including measuring procedures for:
     ❒   coverage of emergency management operations
     ❒   coverage of target professional groups (e.g. civil protection, transport, etc)
☐   Time to achieve these objectives is tested at different levels

Interoperability

Intra-Community activity leading to:
☐   Sharing of lessons learned and plan efficiencies

7.6 Benchmarking

Outcome expected

To facilitate the planning process and the development of a common EU minimum standard of preparedness planning, the Commission should organise an annual forum for benchmarking as part of the existing cooperation arrangements.

7.7 Evaluation and follow-up of events and exercises

Outcome expected

An important tool for improving preparedness and planning is the evaluation of events and exercises, identifying areas for improvement, but also identifying areas that are working well.

MS, Commission and Agencies
☐   Are the following minimum requirements fulfilled?
     ❒   Prepared structure for follow-up and analysis of an event
     ❒   Prepared structure for follow-up and analysis of exercises
     ❒   Prepared structure for integrating experiences and feedback into lessons learned

Interoperability

Intra-Community activity leading to:

☐ Sharing experiences and best practices between the Member States
☐ Sharing experiences and best practices between different sectors

ANNEX 1: Minimum requirements for crisis rooms

1. Background

Coordination and management of public health emergencies is generating more and more interest at European Union level. The Health Security Committee is one of the main proponents of preparedness and response to health threat crises, and as such it has mandated the Generic Preparedness Planning Section to update the 2005 technical document on this topic, including minimum requirements for crisis rooms.

Health security events include outbreaks of infectious diseases and contamination by unsafe food, products, animals or plants or by the dispersion of chemical, biological, radiological or nuclear agents in the environment.

Rapid exchange of information about the evolving situation, awareness of measures taken or envisaged by other countries, and ability to coordinate measures and response activities play a paramount role in the successful management of a crisis. This includes agreeing on key messages and common lines to take with the media.

Setting up special crisis rooms in the Ministries of Health and/or other competent authorities in the Member States would improve contacts between all the stakeholders involved in the risk assessment and management of a major event, be it at national or international level.

This document is based on the experience gathered in recent years by the Health Threat Unit as part of the Health Emergency Operations Facility [HEOF] and it identifies the tools and structures that should ideally be in place to meet the communication challenge. The list is only indicative, to be used as a guide and in no way considered as an obligation. It doesn't address the normal health and hygiene regulations in force in your countries, which have to be applied in any case.

2. Purpose of a crisis room

The main purpose is to enhance communication, collaboration, and coordination with other partners in the management of an incident, enabling better situation awareness, developing common pictures, sharing and verifying information, ensuring consistency of the measures taken, and facilitating decision making.

The technical equipment in the crisis room should enable staff to link with the partners in other existing emergency operations rooms at national level (e.g. others sectors of activity), or internationally [European Commission, EU agencies (e.g. ECDC, EMEA) and international organisations such as WHO etc], interlinking the activities of the health emergency management community and allowing contacts with subject-matter experts.

3. Structure / Facilities

Premises must have enough space to host comfortably the number of people expected to work there during a crisis. It should also incorporate several meeting rooms, of different sizes, including:

A decision making room for crisis managers and senior officials;

An operational communication centre where information is accessible to the specialised information gathering team;

A meeting room from which in-situ and virtual meetings (audio and video conferences) can be hosted;

A coordination room where the situation and possible measures can be evaluated and discussed;

A specific room for the media communication team, including a space for press briefings;

A media room for journalists (if the crisis centre is authorised to address the press directly); however this room must be away from the crisis rooms themselves because of confidentiality concerns;

Break-out rooms for experts;

A support area (secretariat & logistics).

The meeting rooms should be of different sizes, with efficient air-conditioning systems and adequate lighting. Special attention should be paid to the ergonomics of furniture and seating.

Staff should have access to a chill-out space, depending on the probable shifts (daytime/ nighttime/ duration of shifts). They should be able to obtain food and drinks (kitchen?) and have an area for relaxing.

Given the costs of providing crisis management facilities, it should be possible to convert premises rapidly from normal daily business use, to respond to the challenges created by big events.

Different levels of activation should be considered, e.g.:

Green level — Monitoring Activation for everyday work;

Yellow level — Partial Activation when a worrying event is detected;.

Red level — Full Scale Activation, with all primary and support functions implemented in order to respond efficiently to an identified threat.

Other points to be considered are related to security. Crisis rooms should preferably be located in a restricted access zone, with an access control system, fire protection and surveillance (cameras and guards).

4. Equipment

It is possible to share equipment with other stakeholders (e.g. Ministry of Interior or civil protection authorities) and have a Memorandum of Understanding with them.

Minimum equipment	Intermediate configuration	Ideal configuration
IT		
▪ Computers with appropriate software (compatible with other stakeholders, e.g. MS Office)	▪ Computers with appropriate software (compatible with other stakeholders, e.g. MS Office)	▪ Computers with appropriate software (compatible with other stakeholders, e.g. MS Office)
▪ B/W Printers	▪ B/W Printers ▪ Colour printers	▪ B/W Printers ▪ Colour printers ▪ Plotter for maps (wide format printer)
▪ Network drive space for working across groups	▪ Network drive space for working across groups ▪ Document management system	▪ Network drive space for working across groups ▪ Document management system ▪ Crisis management software
▪ Firewall	▪ Firewall	▪ Firewall
▪ Security software (antivirus, etc.)	▪ Security software (antivirus, etc.)	▪ Security software (antivirus, etc.)
▪ Dedicated LAN	▪ Dedicated LAN	▪ Dedicated LAN
▪ IT support	▪ IT support	▪ IT support
Communication		

At least one technical system should be in place to handle classified information (minimum equipment):

RESTREINT UE, CONFIDENTIAL UE or SECRET UE or the corresponding classified information under national law.

▪ Telephones ▪ Possibly encrypted phones, if no other system is in place to handle classified information	▪ Alternative communications tools ▪ Telephones ▪ Mobile phones	▪ Alternative communications tools ▪ Telephones ▪ Mobile phones ▪ Satellite phones ▪ Encrypted phones
	▪	▪ Recording system
▪ Fax ▪ Possibly encrypted fax/pc if no other system is in place to handle classified information	▪ Fax	▪ Fax ▪ Encrypted fax/pc
▪ Access to internet	▪ Access to internet	▪ Access to internet
▪	▪ Access to satellite media	▪ Access to satellite media
▪ Dedicated functional mailboxes	▪ Dedicated functional mailboxes	▪ Dedicated functional mailboxes
▪	▪ Dedicated crisis intranet site	▪ Dedicated crisis intranet and internet sites
▪ WIFI	▪ WIFI	▪ WIFI
▪	▪	▪ Access to an external hotline telephone service
▪ Audio-conferencing Tripod	▪ Audio-conferencing Tripod ▪ Access to an external audio conferencing provider, including a management tool	▪ Audio-conferencing Tripod ▪ Access to an external audio conferencing provider, including a management tool
▪ Bilateral videoconferencing system (ISDN /IP)	▪ 8 point video conferencing system (ISDN /IP)	▪ 32 point video conferencing system (ISDN /IP)
▪ Projector with large screen display	▪ Projector with large screen display ▪ LCD screens	▪ Projector with large screen display ▪ LCD screens
		▪ Smartboards
	▪	▪ Sending of automatic SMS and Voice messages (outsourced to provider or specialised system)
Other material		
▪ Safe	▪ Safe	▪ Safe
	▪ Paper shredder	▪ Paper shredder
▪ Photocopier	▪ Photocopier	▪ Photocopier (B/W and colour)
▪ Back-up power	▪ Back-up power	▪ Back-up power, with

			alternative solutions if the main electricity supply fails – generator or UPS (Uninterruptible Power Source) allowing work for a few hours.

5. Access to specific software and dedicated websites.

In the crisis rooms the staff responsible for each system should have access to the alert and/ or information systems in place at national, Community and international level.

At EU level this includes access by the Ministry of Health or the competent authorities to:

- HEDIS [Health Emergency Diseases Information System] for situation awareness and crisis management
- EWRS [Early Warning and Response System for communicable diseases]
- RAS BICHAT [Rapid Alert System for Biological and Chemical Agents and Threats]
- MedISys [Medical Intelligence System]

Other tools should be available in the crisis centre:

- Mapping software
- Modelling software
- Access to weather forecasts

6. Miscellaneous

Some other essential factors to be considered when setting up a crisis room:

a. Staff training;

b. Establish standard operating procedures for alert and response;

c. Regular rehearsal of plans in place, standard operating procedures and information and communication tools;

d. Regular testing and daily use of all the tools and structures in place;

e. Link/integrate the crisis centre into generic preparedness planning;

f. Think about contingency plans if the centre were suddenly unable to deliver the expected support for crisis management (back-up facilities etc.)

Annex 2: List of abbreviations used

ARGUS	European Commission link/contact structure
ASHT	Alerting System and development of a Health surveillance system for deliberate release of chemicals by Terrorists (Health Programme project)
BCP	Business continuity plan
BICHAT	Biological and Chemical Agent Attacks
BLS	Basic Life Support
BSN	Basic Surveillance Network
B/W	Black and White
CBRN	Chemical Biological and Radiological/Nuclear events
CCC	Crisis Coordination Committee
CEFIC	European Chemical Industry Council
CIE Toolkit project	The public health response to Chemical Incident Emergencies (Health Programme project)
CP	Contact Point
DG	Directorate General
DSN	Dedicated Surveillance Network
DVI	Disaster Victim Identification
EAPCCT	European Association of Poisons Centres and Clinical Toxicologists
ECDC	European Centre for Disease Prevention and Control
ECHA	European Chemical Agency
ECHO	Directorate-General for Humanitarian Aid and Civil Protection
ED	Emergency Department
EDQM	European Department for the Quality of Medicines and Healthcare.
EFSA	European Food and Safety Authority
EISS	European Influenza Surveillance Scheme
EMEA[4]	European Agency for the Evaluation of Medicinal Products
EMPL	Committee on Employment and Social Affairs
EMS	Emergency Medical Services
ENV	Environment (DG)
EOC	Emergency Operating Centre
EOF	Emergency Operations Facility
EPCIP	European Programme for Critical Infrastructure Protection
EPIS	Epidemic Intelligence Portal
ESCON	Epidemiological Surveillance Component of the Community Network

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[4] EMA since February 2010

EU	European Union
EU-27	the 27 member states of the European Union
EUCURIE	European Community Urgent Radiological Information Exchange
EUNID	European Network of Infectious Diseases Physicians
EUPHIN	European Public Health Information Network
EURATOM	European Atomic Energy Community
EVM	European Vaccine Manufacturers
EWRS	Early Warning and Response System
FAO	Food and Agriculture Organization
FMD	Foot and Mouth Disease
GHSAG	Global Health Security Action Group
GHSI	Global Health Security Initiative
GIS	Geographic Information System
GOARN	Global Outbreak Alert and Response Network (WHO)
GOP	General Practitioner
GSCT	Generic Scenarios - release of Chemicals by Terrorists (Health Programme project)
HEDIS	Health Emergency and Disease Information System
HEM	Health Event Manager
HEOF	Health Emergency Operation Facility
HEPA	High Efficiently Particulate Air
HSC	Health Security Committee
HSSCD	Health Surveillance Scheme for Communicable Diseases
HTU	Health Threat Unit
IAEA	International Atomic Energy Agency
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICU	Intensive Care Unit
IHR	International Health Regulations
IP	Internet Protocol
IPCS	International Programme on Chemical Safety
IRIDE	Inventory of Resources of Infectious Diseases in Europe
ISDN	Integrated Services Digital Network
JLS[5]	Justice, Freedom and Security (DG)
JRC	Joint Research Centre
LAN	Local Area Network
LEN	Law Enforcement Network
MedISys	Medical Intelligence System
MIC	Monitoring and Information Centre

[5] DG HOME since February 2010

MoU	Memorandum of Understanding
MP	Medicinal Products
MS	Member States
NATO	Northern Atlantic Treaty Organisation
NEMO	NEtwork on mathematical MOdelling
NFP	National Focal Point
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OIE	International Office for Epizootics
OPCW	Organization for the Prohibition of Chemical Weapons
PDA	Personal Digital Assistant
PHEIC	Public Health Emergency of International Concern
PPE	Personal Protective Equipment
Q and A	Questions and Answers
RAPEX	Rapid Alert Systems for Dangerous Products
RAS- BICHAT	Rapid Alert System on Biological and Chemical Agents Attacks
RAS-CHEM	Rapid Alert System on Chemicals
RASFF	Rapid Alert System for Food and Feed
RD	Research and Development
RELEX	External Relations (DG)
SANCO	Health and Consumers (Santé et Consommateurs) (DG)
SARS	Severe Acute Respiratory Syndrome
SCENIHR	Scientific Committee on Emerging and Newly Identified Heath Risks
SOPs	Standard Operating Procedures
TESSY	The European Surveillance System
TREN[6]	Energy and Transport (DG)
UPS	Uninterruptible Power Source (Supply)
WATA	World Association of Travel Agencies
WG	Working Group
WHO	World Health Organisation

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[6] TREN split into 2 Directorate General since beginning 2010. DG TREN (transport) and DG ENER(Energy)

Annex 3: Definitions

Background

In preparedness plans for health preparedness a number of terms re-appear that are more or less well defined. In an effort to compare planned activities in different states it is necessary to have a common understanding of what these terms means. The collection of terms chose here does not take into account national plans or the context in which they appear. The goal is to have a common understanding of the terms between different countries and facilitate the exchange of information about plans or during a crisis.

In general, the Definitions defined in Article 1 of the International Health Regulations (2005) should be used.

Authentication of sender	establishes identity of the electronic information provider.
Authorisation of a user	establishes what that a user is allowed to do. The operating principle applied is one of least privilege—participants, whether human or machine, will have only the privileges required to fulfil their duties. This approach prevents information over-load and adverse effects from leaks or unauthorised circulation or disclosure of sensitive information and maximises patient privacy as personal data are transmitted through the network.
Bio-safety level	Level of the biocontainment precautions required to isolate dangerous biological agents in an enclosed facility
Closure of premises	Measure to minimise contacts between persons might include closing of public areas such as schools certain work places etc.
Contacts (in case of a smallpox incident)	Primary contacts are persons who have been in touch with a confirmed or probable case during a period starting 24 hours before the start of symptoms according to case definitions and up to the time the scabs fall of. Another group of contacts are persons who have been in contact with contagious materials. Contacts can be divided in two groups
	A Household contacts and persons who have been in face-to-face (direct skin contact) contact or close contacts which allows respiratory transmission with the case. Contacts with infectious material
	B Persons who spent time in the same environment or shared the same air-conditioning system as cases. This includes passengers in the same aircraft
	Secondary contacts or Contacts to contacts
	Person with a household- or face to face contact with a Primary type A contact.
Cordon sanitaire	Establishing a barrier around a defined potentially infected geographical area to prevent the movement of people in and sometimes also out of the area.
Crisis	A serious, unexpected and often dangerous situation, requiring timely action; a situation that may affect or threaten lives, environment, critical infrastructure or core societal functions, may be caused by a natural or man-made disaster
Crisis communication	communicating in a situation that somehow challenges the public's sense of appropriateness, tradition, values, safety, health, security or the integrity of the government
Decontamination	see Art. 1 International Health Regulations (2005) means a procedure whereby health measures are taken to eliminate an infectious or toxic agent or matter on a human or animal body surface, in or on a product prepared for consumption or on other inanimate objects, including conveyances, that may constitute a public health
Emergency communication	When there is a time-sensitive urgency to communicate to a select group of people as a result of an abnormal situation that requires

	prompt action, beyond normal procedures, in order to limit injury, damage or death to persons, property or the environment. Frequently, communications are very operational and intended to prompt or guide immediate action
Early warning system	A system for identification of potential crisis mainly through bulletins, forecasts, alerts
Evacuation	The action of withdrawing from, or removing the occupants of a building, or the inhabitants of a region, considered dangerous, to a safer place or area; The process of transporting injured persons to centres of emergency care.
High-risk exposure groups(in case of a smallpox incident)	In some plans called first responders, which is a term most often reserved for the special groups created to manage initial cases of smallpox. Ii is anybody that can be identified as likely to be the first to meet cases of smallpox in a country. Normally this includes health-staff mainly in emergency departments and ambulance personnel. Depending on the scenarios that are considered likely other groups should be considered such as the police, customs and other border-officials.
Integrity of information	implies that the information passing through, or residing on the system, is genuine and remains unadulterated. For transmission of data, random corruption should be handled on the protocol level with in-build error correction. To counter intentional corruption of transmissions, the operating principle will be that every communication transmission has to be encrypted, because of the dynamic, peer-to-peer nature of the networks.
Isolation	see Article 1 International Health Regulations (2005) means separation of ill or contaminated persons or affected baggage, containers, conveyances, goods or postal parcels form others in such a manner as to prevent the spread of infection or contamination.
Mass emergency	A major incident with a large number of people involved, causing an exceptional disproportion (in size or in time) between the medical and psycho-social needs on the one hand and the response capacity to these needs on the other hand
Disaster	Any emergency situation in which normal life is thrown suddenly into confusion; The population, as a result, having need of protection, food, clothing, shelter, medical attention, social care and other essentials
Medical intelligence	That category of intelligence resulting from collection, evaluation, analysis, and interpretation of foreign medical, bio-scientific, and environmental information that is of interest to strategic planning and to military medical planning and operations for the conservation of the fighting strength of friendly forces and the formation of assessments of foreign medical capabilities in both military and civilian sectors.
Player	Administrative departments and authorities, institutes, companies, and community services (e.g. Hospitals, rescue workers, EMS departments, …) at any level of functioning, providing an essential role in the event assessment and management
Preparedness	The knowledge and capacities developed by government, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current crisis
Preparedness planning	Factoring in plans the local, national and EU dimension in various sectors that impinge on emergency plans: provide a backbone structure for developing core elements to the different types of health threats and improve the inter-operability of such plans, addressing threats and emergencies which are threatening or are likely to threaten public health in more than one Member State.

Priority medicines	Priority Medicines is a collective term for those medicinal products which are needed from a public health /care perspective, but are not existing nor being developed due to lack of market perspective. The term includes orphan drugs, medicines for children and the elderly and vaccines against major health threats caused by communicable diseases and bio-terrorism.
Public Health Threat	Is an event (incident), condition or agent, which by its presence has the potential to rapidly harm, directly or indirectly, an exposed population, sufficiently to lead to a crisis.
Public Health Crisis	A sequence of events following a public health threat, where the limited time available for deciding and the large degree of uncertainty leads to overburdening the normal response capacity and undermining of authority.
Quarantine	pursuant Art. 1 International Health Regulations (2005) means the restriction of activities and/or separation from others of suspect persons who are not ill or of suspect baggage, containers, conveyances or goods in such a manner as to prevent the possible spread of infection or contamination.
Rapid alert and notification system	A system primarily used for rapid notification of emergencies and serious events between the European Commission, competent authorities in the EU Member States, and occasionally the European Commission's implementing partners and interlocutors
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of crisis-affected communities, including efforts to reduce crisis risk factors
Response	The provision of emergency services and public assistance during or immediately after a crisis in order to save lives, reduce impacts on health, environment and society, ensure public safety and meet the basic subsistence needs of the people affected
Restriction of movement	Measures such as closure of public transport (airports, railways etc) to inhibit the spread of the disease.
Ring-vaccination or Search and Contain strategy	The strategy developed by WHO during the eradication of smallpox more adequately called a search and containment strategy. The mainstay is the early identification and isolation of cases, active search for and vaccination of all contacts and monitoring of these contacts to identify early signs of diseases to be able to isolate them at an early stage.
Risk	The combination of the probability of a crisis and its negative consequences
Risk assessment	A scientifically based process consisting of the following steps: I) hazard identification, ii) hazard characterization, iii) exposure assessment, and iv) risk characterization
Risk communication	The exchange and dissemination of appropriate information about risks to enable decision makers, stakeholders and the public to make appropriate decisions
Risk management	A process, distinct from risk assessment, of weighing policy alternatives, in consultation with interested parties, considering risk assessment and other factors relevant for health protection of consumers and for the promotion of fair trade practices, and if needed selecting appropriate prevention and control options.
Standing group	Group available for very immediate meeting (within a 24 hour period).
Threat area	The technical area such as environment and expertise that may be required to deal with the consequences of the threat: biological, chemical, radio-nuclear.
Tier	A group key players operating at a certain administrative level. During a wide spread incident, there is often a need to establish a national

level, which manages wider than national strategic issues. For major incidents this would be the Health Threat Unit, DG SANCO.

In the current context of the above there are four tiers that need to be considered for action:

- EU co-ordinating structures and committees

- Member State; e.g.: Ministries of Health, Institutes of Public Health, other "competent bodies", laboratories, academia

- Regional, provincial or country level: to be addressed by the each Member State

Local level or unit level e.g.: operational units such as hospital

Vulnerability The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a crisis

Annex 4: Legal framework

Relevant legal framework for the preparedness planning and response to public health emergencies

International Health Regulations (IHR). WHO 2005.

Article 152 (Public health article) in Title XIII, Public Health

European Parliament and Council regulation 851/2004 (ECDC).

European Parliament and Council decision 2119/1998 Network on communicable diseases

Council conclusions 17 December 2001: Informal cooperation and coordination body by Health Ministers and the European Commissioner for Health and Consumer Protection.

Council conclusions 22 February 2007: Transitional prolongation of HSC mandate 2007-09

Council conclusions 16 December 2008 (after informal Health Ministers meeting Angers, 8-9 September 2008). Provide HSC with legal basis; Legislative initiative to adopt the status of HSC to the health challenges.

Commission Decision 57/2000 Early Warning and Response System (EWRS).

Commission Decision 96/2000 list of communicable diseases and special health issues under epidemiological surveillance.

Commission Decision 2002/253 case definitions for reporting communicable diseases

Commission Decision 2004/210/EC on setting up Scientific Committees in the field of consumer safety, public health and the environment

Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data

Regulation (EC) 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data

Commission Directive 94/3/EC on establishing a procedure for the notification of interception of a consignment or a harmful organism from third countries and presenting an imminent phytosanitary danger

COM(2004)698 on Prevention, preparedness and response to terrorist attacks.

COM(2004) 701 Preparedness and consequence management in the fight against terrorism.

COM (2009) 273 CBRN package – adopted in June 2009.
Horizontal communication on strengthening Chemical, Biological, Radiological and Nuclear Security in the European Union.
> EU Action Plan containing specific measures for the individual CBRN strands (bio-preparedness, radiological and nuclear risk reduction, chemical threats) in the areas of prevention, detection and response as well as a set of horizontal actions cutting cross (Annex to the communication).
> Staff working document *Bridging Security and Health* which presents good practices in the cooperation of law enforcement and health authorities on the response to CBRN incidents.

Directive 95/50/EC of 6 October 1995 on uniform procedures for checks on the transport of dangerous goods by road.

Seveso II Directive (96/82/EC) regarding the safety of fixed installation storing higher quantities of dangerous substances; and on the control of major-accident hazards.

Environment Impact Assessment (EIA) Directive (85/337/EEC) and Amended EIA Directive (97/11/EC)

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive), OJ L 197, 21.7.2001, p. 30.

Directive 2003/105/EC of the European Parliament and of the Council of 16 December 2003 amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Regulation (EC) No 648/2005 (Community Customs Code).

European Community Regulation REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances) (EC 1907/2006)

Council Decision 2007/162/EC, Euratom establishing a Civil Protection Financial Instrument, OJ L71, 10.3.2007, p. 9.

Council Decision 2007/779/EC, Euratom establishing a Community Civil Protection Mechanism (recast), OJ L 314 , 01/12/2007, p.9.

Commission Decision 2008/73/EC, Euratom of 20 December 2007 amending Decision 2004/277/EC, Euratom as regards rules for the implementation of Council Decision 2007/779/EC, Euratom establishing a Community civil protection mechanism.

Council Directive 2008/114/EC of 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection.

Directive 2008/68/EC of 24 September 2008 on the inland transport of dangerous goods.

Directive on information to the public 89/618/Euratom

Directive on EU Basic Safety Standards 96/29/Euratom

Regulation (EC) No 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency.

Regulation (Euratom) No 3954/87 laying down maximum permitted levels of radioactive contamination of foodstuffs and of feedingstuffs following a nuclear accident or any other case of radiological emergency.

Council Decision on early exchange of information 87/600/Euratom

Annex 5: Community Capacity in Crisis Management

Inventory of crisis management capacities in the European Commission and Community Agencies (2009)

This inventory was done in 2009 and it provides a holistic view of management of crises, based on capacities and instruments available in more than twenty European Commission services and numerous agencies. It addresses the overall cycle of disaster prevention, preparedness, response and recovery. It includes capacities aimed at events happening inside and outside the European Union. It takes an all-hazards approach: today's crises are increasingly multi-faceted so such must be our response. Capacities are mapped here not per sector but per function; in other words, not based on who does what, but what exists to address a given problem.

This table is an extract from this inventory including those functions in which SANCO contributes.

	Function	Lead DGs	Associated DGs	Associated Agencies
Crises in the EU				
Prevention	Risk assessment and planning	(ENV[7]) ECHO	(JLS) HOME, JRC, REGIO, SANCO, TAXUD	FRONTEX
	Health security including rapidly evolving major health threats	SANCO	JRC, (JLS) HOME	ECDC
	Counter terrorism	(JLS) HOME	SANCO, (ENV) ECHO, JRC, MARKT, TAXUD	Europol
	Hazardous materials	(JLS) HOME, SANCO	(TREN) ENER, ENTR, JRC, ENV, TAXUD	Europol
Preparedness	Health security including rapidly evolving major health threats	SANCO	(JLS) HOME, JRC, (ENV) ECHO, TAXUD	ECDC, Europol
	Counter terrorism	(JLS) HOME	SANCO, (ENV) ECHO, (TREN) ENER, JRC	Europol
	Hazardous materials	(JLS) HOME, ECHO	(TREN) ENER, JRC, SANCO, TAXUD	Europol, ECDC
Response	Health security including rapidly evolving major health threats	SANCO	(ENV) ECHO, (JLS) HOME, JRC, AGRI, TAXUD	ECDC, EFSA, Europol
	Emergency management	SG, ENV, SANCO	JRC, (TREN) ENER, MOVE, (JLS) HOME, INFSO	ECDC, EMSA, FRONTEX
Crises outside the EU				
Prevention	Regional and Cross-border cooperation with and between neighbouring countries	ELARG, RELEX	REGIO, (ENV) ECHO, SANCO	

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[7] Civil protection moved from ENV to ECHO in February 2010

Preparedness	Disaster preparedness and mitigation	ECHO	(ENV), AIDCO, DEV, (JLS) HOME, SANCO	
Response	Emergency management and coordination capacities at HQ	SG, RELEX, ECHO, (ENV) SANCO	ELARG, DEV, JRC, (TREN) MOVE, ENER	ECDC, EMSA, EFSA, FRONTEX, ENISA

Directorate General (DG)

AGRI   Agriculture and Rural Development

AIDCO Europe Aid

DEV   Development

ECHO   Humanitarian Aid

ELARG   Enlargement

ENTR   Enterprise and Industry

ENV   Environment

INFSO   Information Society and Media

JLS   Justice, Freedom and Security

JRC   Joint Research Centre

MARKT   Internal Market and services

REGIO   Regional Policy

RELEX   External Relations

SANCO   Health and Consumers

SG   Secretariat General

TAXUD   Taxation and Customs Union

TREN   Energy and Transport

Corrigendum (2010):

DG ECHO is now in charge of Civil Protection (it was previously DG ENV)

DG TREN was split into DG MOVE in charge of transport and DG ENER for energy

DG JLS was divided into two new created DGs: DG for Home Affairs (HOME) and DG for Justice and Fundamental Rights (JUSTICE)

European Community Agency

ECDC   European Centre for Disease Prevention and Control

EFSA   European Food Safety Authority

EMSA   European Maritime Safety Agency

ENISA   European Network and Information Security Agency

Europol European Police Office (European Union Agency since 2010)

FRONTEX   European Agency for the Management of Operational Cooperation at the External Borders

Corrigendum (2010):

ECHA: European Chemicals Agency

EMA: European Medicines Agency