World Health Organization
REGIONAL OFFICE FOR Europe

ecdc
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

Joint European Centre for Disease Prevention and Control and WHO Regional Office for Europe Consultation on pandemic and all hazard preparedness

20–21 November 2013
Bratislava, Slovakia

ABSTRACT

The joint European Centre for Disease Prevention and Control and WHO Regional Office for Europe consultation on pandemic and all-hazard preparedness was held on 20–21 November 2013 in Bratislava, Slovakia. Participants included 80 national focal points for pandemic influenza planning, preparedness and response, and International Health Regulations from the European Union (EU), the European Economic Area, south-eastern Europe, Israel, Switzerland and Turkey. The meeting focussed on cross-cutting issues related to pandemic and all-hazards preparedness in light of the implementation of the IHR and the recently adopted EU Decision 1082/2013/EU on serious cross-border threats to health. Topics including risk mapping, risk assessment and multisectoral coordination were addressed, as was the importance of having compatible preparedness plans both within and between countries. Continuous monitoring and evaluation of preparedness plans and of existing capacities, especially those that are cross-cutting for all-hazards preparedness, was another central topic of the meeting.

Keywords

DISEASE OUTBREAKS
EMERGENCY PREPAREDNESS
INFLUENZA, HUMAN
PANDEMICS
PUBLIC HEALTH SURVEILLANCE
RISK ASSESSMENT

Address requests about publications of the WHO Regional Office for Europe to:
Publications
WHO Regional Office for Europe
UN City, Marmorvej 51
DK-2100 Copenhagen Ø, Denmark
Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office web site (http://www.euro.who.int/pubrequest).

CONTENTS

Page

Introduction

In Europe, there have been significant developments related to public health preparedness in recent years.Many WHO European Member States have been implementing or are in the process of implementing the International Health Regulations (IHR) and many reviews of lessons learnt have taken place after the influenza (H1N1) pandemic of 2009. There has been a growing recognition that many of the components of a sound pandemic preparedness strategy could be beneficial to other types of health threats, and of the need to ensure knowledge transfer from the field of pandemic preparedness to the field of all-hazard preparedness.The impetus is further strengthened by the recent Decision No. 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to healthand repealing Decision No 2119/98/EC(hereafter referred to as Decision 1082/2013/EU), which promotes strengthened European preparedness coordination*(1)*.

In light of the above, the European Centre for Disease Prevention and Control (ECDC) and the WHO Regional Office for Europe jointly arranged a consultation on pandemic and all-hazard preparedness to promote further collaboration between the organizations and Member States.The meeting took place on 20–21 November 2013 in Bratislava, Slovakia.

Dr Jan Mikas from the Public Health Authority of Slovakia opened the meeting and welcomed the participants. Participants included 80 national focal points for pandemic and generic preparedness and the International Health Regulations from the European Union (EU), the European Economic Area (EEA), south-eastern Europe, Israel, Switzerland and Turkey.

Scope and purpose

To respond successfully during a pandemic or other major health threats, it is essential that national preparedness plans and capacities are up-to-date and functional. Exercises and simulations, relevant staff training and use of the plans in peacetime or in an emergency are integral parts of the planning process.

With the entry into force of the revised IHR in June 2007*(2)*, all IHR States Parties were required to assess the ability of their national structures to meet minimum national core capacities for surveillance and response as specified in the IHR, and to develop a plan of action to ensure that the capacities will be present and functioning by 2012. WHO is mandated to provide appropriate tools, guidance and support to States Parties to achieve these goals. For this purpose, a framework was developed to monitor the development of their core capacities at national level.

Similarly, in the aftermath of the influenza pandemic (H1N1) 2009, Member States, WHO, ECDC and other organizations also have had a unique opportunity to benefit from the experience and lessons learnt for their preparedness activities and strategies, as well as for other major health threats. Numerous evaluations at national, regional and global levels included an assessment of the usefulness of pandemic plans and preparedness activities in aiding the response, such as an evaluation of the response to pandemic (H1N1) 2009 conducted by the WHO Regional Office for Europe*(3)*.

Lessons learnt from past events also fed into the development of the new Decision 1082/2013/EU. The new legal instrument, which entered into force on 6 November 2013, requests EU Member States to periodically report to the European Commission (EC) on their state of preparedness and their response planning activities. The enhanced coordination aims at promoting interoperability between national approaches, addressing multisectoral coordination and business continuity planning, and supporting the homogenous implementation of core capacities across the EU.

The combination of these elements makes it an appropriate time to take stock of past and current monitoring mechanisms and discuss how these can be further streamlined.

The focus of the meeting was to provide an overview of the current preparedness landscape and to explore gaps in preparedness implementation across the EU and countries of the WHO European Region. The intention was to further strengthen pandemic preparedness planning, while also ensuring that experiences gained in this area can feed into all-hazard preparedness planning. In addition, the meeting offered an opportunity for Member States to highlight areas in which ECDC and WHO actions could be of particular added value.

Specific objectives included:

- to discuss development, monitoring and synergies between IHR core capacities, pandemic preparedness, and capacity provisions included in Decision 1082/2013/EU;
- to discuss practical implications of Decision 1082/2013/EU for EU/EEA Member States and their interactions with ECDC and WHO Regional Office for Europe, as well as synergies with the IHR;
- to identify and share good practices and agree on key areas for continued intercountry collaboration; and
- to advise ECDC and the WHO Regional Office for Europe on priority areas of preparedness work for the coming years.

Summary of key discussions

Introductory session

The IHR (2005) and Decision 1082/2013/EU are legal frameworks oriented around enhancing preparedness capacities*(1,2)*. The IHR (2005) requires WHO Member States to develop and maintain capacities to prevent and respond to acute public health risks caused by any hazard. Decision 1082/2013/EU promotes strengthened preparedness coordination between EU Member States. The WHO pandemic influenza risk management guidance emphasizes that pandemic preparedness should strengthen capacities, which are common requirements to responding to any health threat. The frameworks signal an evolving paradigmshift in emergency risk management in health, from a single hazard to an all-hazards approach and from an event-based to a risk-based approach (Table 1).

Given this context, the session focused on how current global WHO and EU regulations and guidance can strengthen and monitor preparedness and response capacities in Member States. The focus was, in particular, on capacities which are common to responding to any health crisis

and how countries can benefit from the extensive experience of preparing and responding to the 2009 H1N1 pandemic when preparing for other health threats.

Table 1.Evolving paradigm for emergency risk management for health

From	To
Event-based	Risk-based
Reactive/response	Proactive/prevention
Single-hazard	All-hazards
Hazard-focus	Vulnerability/capacity/resilience focus
Single sector/agency	Multisectoral/whole-of-society
Response-focus	Risk management

Member States need to develop and strengthen the capacities that are needed to respond to any health event, such as coordination and command and control mechanisms, as well as communication between sectors and from national to local level. In addition to the common capacities and mechanisms, particular mechanisms and skills need to be developed for responding to specific events, such as a pandemic (e.g. surge capacity in hospitals for a long period of time).

Risk and severity assessments in preparedness planning

Session 2 began with plenary presentations on the WHO pandemic severity assessment tool, the ECDC annual risk assessment for influenza*(7),* and the broader scope of threat mapping methodologies to inform preparedness planning.Thereafter, participants were divided into two groups: those who discussed the WHO pandemic severity assessment tool and the ECDC annual influenza risk assessments (influenza), and those who discussed approaches to threat/risk mapping for all-hazard preparedness planning (all-hazard).

Risk mapping

Globally at any one time, between 30 and 40 countries are affected by a crisis caused by e.g., communicable diseases, drought, earthquake, mass movements or accidents. Around 80% of response actions in an emergency are estimated to be generic, and 15% of actions are estimated to be hazard-specific, with just 5% unique to the specific event. Risk mapping is a useful tool in preparedness planning to prioritize preparedness activities and sectors to coordinate with, but during an actual acute public health event, risk and severity assessments will guide the implementation of control measures.

One of the IHR core capacity indicators for preparedness is “priority public health risks and resources are mapped”*(4).* The group work on risk mapping for all-hazard preparedness revealed that, although some countries do map out risks, these tend to be across the board (e.g. earthquakes, floods, pandemics). Some countries have legal obligations to review the risk horizon.

Participants noted that there is a need to more systematically compare and prioritize different infectious disease risks. This would assist preparedness planning, as well as identification of key preparedness gaps and of other important sectors to better liaise with. Participants identified a need for a risk/threat mapping tool at EU level to guide national activities, and a need for risk mapping tools and methods based on an all-hazard approach, including training workshops.

ECDC noted that it would initiate the development of a tool for assessing and prioritizing different infectious disease threats for planning purposes under its 2014 workplan.

Risk assessments for influenza

Risk assessment is a systematic process of collecting, assessing and documenting information to determine the level of risk of an event. It provides the basis for taking action to manage and reduce the negative consequences of public health risks. Probability, severity, the proportion of a population likely to be affected by a hazard and the impact of the hazard on different sectors are some of the aspects that need to be included in a risk assessment.

The WHO guidance document, *Pandemic influenza risk management*, highlights the importance of national risk assessments to determine response measures rather than Member States relying only on the global risk assessment*(5)*. Pandemic plans should be developed to scale up or down response, depending on the actual severity and impact of the pandemic. The guidance includes criteria for assessing the severity of an influenza pandemic which, in addition to including data on severity of disease, also includes data on the impact on health care services and absenteeism from workplaces and schools. A severity profile of an event needs to be established to advise Member States and policy-makers on which response measures to implement. Information on virological characteristics, clinical presentation, transmission patterns, mortality and morbidity, and impact of an influenza pandemic are required for an appropriate assessment, and to evaluate how severe the event may be. Severity assessment is a continuous process and needs to be done repeatedly.

The participants discussed a survey developed by WHO aimed at determining the extent to which Member States would be able to provide the necessary data to conduct an assessment of the severity of an influenza pandemic in a timely manner. Participants considered that the number of variables for data collection was too ambitious and that many Member States would not be able to collect or report the data. On the other hand, identifying the type of data that could be collected is not always possible to predict beforehand, as countries may not have mandatory national notification of all cases. Also, it was noted that the level of detail of the information to be collected should be tailored to the needs of policy- and decision-makers. Lastly, a distinction should be made between information that was needed at country level versus information needed for global risk assessment.

Several conclusions were reached:

- Member States requested the development of a tool for mapping and prioritizing various public health risks.
- ECDC will begin developing a risk ranking tool for infectious diseases in 2014.
- A pandemic severity assessment tool is considered useful to inform decision makers but it needs to be tailored to fit this purpose.
- Participants proposed that WHO would organize a meeting to discuss the data needs with Member States before pilot-testing the tool.
- A number of Member States would be willing to pilot the WHO tool.

Interoperability of preparedness plans

Interoperability refers to the level of compatibility of e.g. preparedness plans between Member States, regions in a country or different sectors. Interoperability between Member States' pandemic plans is important because by knowing plans of e.g. neighbouring countries, coordination of pandemic planning and response can be enhanced (e.g. migrant workers or cross-border health care).

Decision 1082/2013/EU forms the legal basis for EU Member States to put in place comparable, interoperable preparedness plans. The preparedness plans should be based on flexible planning assumptions and include business continuity plans for the health and non-health sectors to ensure a cross-sectoral response. Decision 1082/2013/EU also encourages the sharing of best practices among countries.

Member States pointed out that international interoperability should start with neighbouring countries, and even regions within countries, as it is often regions near national borders where planned response measures to an incident need to be compatible. In addition, it was noted that sharing plans may not be sufficient for ensuring interoperability and that it would be much better to ensure that planning processes are mutually undertaken.

It is important to recognize the impact of a public health crisis on sectors other than the health sector and the need for the sectors to develop preparedness plans. Sustained activities during a crisis within the health sector are often dependent on the continuation of operations in other essential services. While the specific set of essential services varies from country to country, there is a core set of essential services (e.g. water supply, telecommunications and energy supply) the failure of which can have economic and social consequences, as well as impact on other services. Interoperability or coordination of preparedness plans between essential sectors is therefore important to increase a country's resilience to face a pandemic or other health hazard.

Member States agreed that exchange of pandemic plans and best practices, mutual planning activities, international exercises and regional workshops all enhance international interoperability and that it is creating dialogue on preparedness planning between Member States. There was consensus that a European overview of preparedness plans would promote sharing of strategies and thereby enhance interoperability of preparedness plans in Europe.

Three conclusions were reached:

- Member Statesagreed that sharing key information and strategies from pandemic preparednessplans would be useful and necessary.
- Good practice examples of interoperability across borders and sectors at European or national level should be monitored by the WHORegional Office for Europe and ECDC and shared when appropriate.
- When national exercises are held, they should ideally include all the sectors considered relevant in response to pandemics or other events with a public health impact.

Avian influenza A(H7N9) and Middle East respiratory syndrome coronavirus (MERS-CoV)

Epidemiological updates for both A(H7N9) and MERS-CoV were given during two plenary presentations. At the time of the meeting, 176 MERS-CoV cases had been reported (157 confirmed, 19 probable), and the case fatality rate was nearly 40%. There were some reported links between MERS-CoV and camels, according to recent data, but this needed further verification; camels had not been linked as a direct transmission route and many sporadic human cases did not have a link with camels. WHO noted the need for a multinational case-control study to further study MERS-CoV.

An epidemiological update on influenza A(H7N9) was also provided. At the timeof the meeting, the majority of confirmed cases were in south-east China. Following a quiet summer, cases were occurring again. Roughly 70% of cases had reported contact with poultry, but there was no evidence of sustained human-to-human transmission.

Monitoring and evaluation of preparedness plans

Since coming into force in June 2007, the WHO Regional Office for Europe has been supporting Member States in the process of implementing IHR core capacities, which include those required for early detection, reporting to WHO, and response to acute public health threats. The deadline for implementing all core capacities was June 2012, with the possibility of extension to 2014. Twenty-one out of 53 WHO European Member States are still working on establishing IHR core capacities by 2014. Reporting on the status of implementation of the IHR core capacities has been facilitated by a monitoring framework developed by WHO*(4)*. Considering that States Parties that did not request an extension of the 2012 deadline for implementation of the IHR are no longer required to report to WHO on the status of IHR implementation, WHO is seeking input from Member States on how to monitor preparedness, as described under the IHR in the medium and long term so that resources can continue to be prioritized to fill gaps.

The newly adopted Decision 1082/2013/EU sets out requirements for EU Member States to report on the state of preparedness as well as response planning activities. The requirements are aligned with the IHR core capacities and the European Commission is developing a reporting template for EU countries. Regional workshops and consultations planned for 2014 will help move the process forward and also ensure that input from Member States is solicited.

Member States noted that it would be useful to define the types of capacities that should be monitored, and that identifying so-called universal aspects of preparedness should be a priority. There is an axiom that 80% of capacity to manage an emergency is mutual to all threats. The veracity of this should be evaluated so that monitoring of these capacities is prioritized. Some of the capacities that were mentioned in other sections included surge capacities, multisectoral coordination and risk/crisis communication.

Monitoring preparedness capacities and implementation can be a strategic means not only for identifying progress and gaps, but also for keeping attention on the issue.In the United States of America, a National Health Security Preparedness Index was launched in December 2013 as a new tool to annually measure and advance health security preparedness*(6)*. The tool supports the assessment of preparedness at state and county level. It has been developed for three main reasons: public health is not very well understood by the public; only few legislators focus on

public health; and best practices from some states could be shared with other states. The index was built by and for the 50-state community and the United States Centers for Disease Control and Prevention (CDC) facilitated the process. The result is an index based upon 128 separate indicators, geared towards measuring key areas of preparedness. Key objectives for the Index include quality improvement, resource and policy decisions, enhancing collaboration and advancing the science of measuring preparedness.

Additional discussion focussed on Member States' experiences in monitoring and assessing preparedness, e.g. with the IHR assessment tool or the WHO/ECDC/EC pandemic preparedness assessment visits. WHO invited Member States to share experience with national monitoring and to indicate the areas and indicators that should be monitored internationally. Member States agreed that exercises at national and European level are useful for assessing their level of preparedness, but also said that, for the most part, there is no systematic national process in place for monitoring IHR and preparedness capacities. Finally, it was considered crucial that preparedness plans are reviewed regularly and updated as new information become available, e.g. after a pandemic.

Four conclusions were reached:

- Member States encouraged the EC, the WHO Regional Office for Europe and ECDC to continue to coordinate monitoring and evaluation of preparedness.
- Focus should be on monitoring the capacities that are common to respond to any health event
- Member States need to regularly review preparedness plans and update them according to new information.
- External assessment visits by WHO/ECDC/EC are useful for national advocacy purposes and their continuation should be considered.

Conclusions

In general, response to the meeting was positive, and participants noted that implementation of Decision 1082/2013/EC may be a challenge, as it potentially opens up new requirements for them. They noted that there is a clear and strong need for ECDC and the WHO Regional Office for Europe to facilitate technical implementation of Decision 1082/2013/EC and continued implementation of the IHR. Many Member States would welcome strengthened efforts in the area of preparedness support for countries. There was consensus that the WHO Regional Office for Europe, EC and ECDC should coordinate with each other for preparedness and monitoring activities, to the extent possible.

All Member States participating in the meeting had pandemic preparedness plans in place*(8)*. However, the extent to which the plans are operational varies considerably and the majority of national pandemic plans have still not been revised subsequent to the 2009 H1N1 pandemic. Participants from only a few Member States reported to have all-hazards preparedness plans.

Risk and severity assessments in preparedness planning

Member States requested the development of a methodology for all-hazard risk mapping, noting the added value of strategic planning methodologies as Member States embark upon a wide range of new preparedness activities. A risk ranking tool could be used by Member States to systematically compare and prioritize among emerging health threats generally, as well as infectious disease threats specifically. ECDC noted that its 2014 work plan has budgeted for a risk ranking tool for infectious disease.

Member States requested the completion of the joint WHO Regional Office for Europe/ECDC guidance, which is intended as a practical tool for pandemic plan revision. Finally, WHO is finalizing its pandemic severity assessment tool and will involve Member States in the process.

Interoperability of preparedness plans

Member States pointed out that cross-border interoperability should start with neighbouring countries and even regions within a country. Participants also highlighted that differences in plans might be necessary and, therefore, the goal should be awareness and coordination of plans rather than actual harmonization of plans.

The WHO Regional Office for Europe and ECDC are working on publishing an overview of key features of revised national pandemic plans, as a reference for pandemic preparedness and response strategies for Member States. Member States are encouraged to publish their revised pandemic plans so they can be included in the overview.

Interoperability of preparedness plans within a country and multisectoral collaboration should be enhanced in all Member States, as preparedness planning is still concentrated on the health sector.

Member States noted that, in relation to Decision 1082/2013/EC, assistance by the EC and ECDC in sharing information about the interoperability of preparedness plans would be very welcome.

Monitoring and evaluating preparedness plans

There was consensus that monitoring and evaluation of preparedness plans is essential in order to continue to strengthen preparedness and address shortcomings in preparedness. It was agreed that monitoring should be focused on the preparedness capacities that are universal to all health hazards. Member States pointed out that crucial preparedness capacities have not yet been agreed, and that the input of public health experts from Member States would be needed in order to define the capacities that should be measured.

References[1]

1. Decision No.1082/2013/EU of the European Parliament and of the Council of 22October 2013 on serious cross-border threats to health and repealing Decision No 2119/98/EC. O. J. E. C. 2013, L 293:1–15 (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:293:0001:0015:EN:PDF).
2. International Health Regulations, second edition. Geneva: World Health Organization; 2008 (http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf).
3. Recommendations for good practice in pandemic preparedness: identified through evaluation of the response to pandemic (H1N1) 2009. Copenhagen: WHO Regional Office for Europe; 2010 (http://www.euro.who.int/__data/assets/pdf_file/0017/128060/e94534.pdf).
4. International Health Regulations. IHR monitoring framework: checklist and indicators for monitoring progress in the development of IHR core capacities in States Parties. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/bitstream/10665/84933/1/WHO_HSE_GCR_2013.2_eng.pdf).
5. Pandemic influenza risk management. WHO interim guidance. Geneva: World Health Organization; 2013 (http://who.int/influenza/preparedness/pandemic/influenza_risk_management/en/).
6. National Health Security Preparedness Index [online tool]. Arlington (VA): Association of State and Territorial Health Officials; 2014 (http://www.nhspi.org/).
7. Operational guidance on rapid risk assessment methodology. Stockholm: European Centre for Disease Prevention and Control; 2011 (http://www.ecdc.europa.eu/en/publications/publications/1108_ted_risk_assessment_methodology_guidance.pdf).
8. Full list of national preparedness plans. In: WHO Regional Office for Europe [website]. Copenhagen: WHO Regional Office for Europe; 2014 (http://www.euro.who.int/en/health-topics/communicable-diseases/influenza/pandemic-influenza/pandemic-preparedness/national-preparedness-plans2/full-list-of-national-preparedness-plans).

[1]All references accessed on 14 March 2014.

Annex 1. Agenda

Wednesday, 20 November 2013

Session 1: introductory presentations *(Chair: Slovakia)*

Welcome (*Dr Mika, Slovakia*)

Introduction and meeting objectives
(*Massimo Ciotti, ECDC*; *Caroline Brown or Thomas Hofmann, WHO Regional Office for Europe*)

Update on the EU Decision on serious cross-border threats to health
(*Franz Karcher, European Commission*)

Update on IHR implementation
(*Thomas Hofmann, WHO Regional Office for Europe*)

Update on WHO pandemic guidance
(*Adrienne Rashford, WHO)*

Synergies between pandemic and all-hazard preparedness
(Massimo Ciotti, ECDC; Gerald Rockenschaub, WHO Regional Office for Europe)

Discussion

Session 2: risk and severity assessments in preparedness planning
(Chair: Angel Kunchev, Bulgaria)

Group work. 2A: risk and severity assessments for influenza (flu).
2B: risk mapping and assessments for all-hazard preparedness (preparedness/response)

Introduction to the group work (parallel)
(*Tony Mounts, WHO); René Snacken, Jonathan Suk, ECDC*)

Parallel group discussion (2a and 2b)

Session 3: interoperability of preparedness plans
(Chair: Franz Karcher, European Commission)

Group work. What strategic information affecting neighbouring countries and different sectors should be shared – and how and when? How can planning processes be jointly undertaken across countries?

Introduction to the session on interoperability – WHO/ECDC proposal on information sharing (plenary) (*WHO, ECDC*)

Parallel group discussion

Thursday, 21 November 2013

Session 4: avian influenza A(H7N9) and MERS-CoV
(Chair: Nick Phin, United Kingdom)

Updates on A(H7N9) and MERS-CoV, and the implications of these diseases for preparedness planning and activities

MERS-CoV (*WHO*)

A(H7N9) (*René Snacken, ECDC*)

Plenary discussion on A(H7N9) and MERS-CoV preparedness

Session 5: monitoring and evaluation of preparedness plans
(Chair: Angela Schwartz, CDC)

Group work. Mechanisms for monitoring and evaluation of preparedness plans and capacities

Introduction to the session on monitoring and evaluation (plenary)
(*Thomas van Cangh, ECDC; Angela Schwartz, CDC; Thomas Hofmann, WHO Regional Office for Europe*)

Parallel group discussions

Session 6: final group presentations
(Chair, ECDC, WHO Regional Office for Europe)

Plenary presentations and discussion

Closure of meeting

Annex 2.List of participants

Albania
Tritan Kalo
University Hospital Center “Mother Tereza”

Dritan Ulqinaku
Institute of Public Health

Austria
Martina Brix
Federal Ministry of Health

Gabriele Dorninger
Federal Ministry of Health

Belgium
Dirk De Groof
Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu

Steven Van Gucht
Scientific Institute of Public Health

Bosnia and Herzegovina
Ljubica Jandric
Public Health Institute of the Republika Srpska

Draženka Malićbegović
Ministry of Civil Affairs of Bosnia and Herzegovina

Alen Seranic
Ministry of Health and Social Welfare of the Republika Srpska

Bulgaria
Mira Kojouharova
National Centre of Infectious and Parasitic Diseases

Angel Kunchev
Ministry of Health

Croatia
Vladimir Draženović
Croatian National Institute of Public Health

Pavle Jeličić
Croatian National Institute of Public Health

Czech Republic
Jozef Dlhy
Ministry of Health

Jan Kyncl
National Institute of Public Health

Denmark
Tyra Grove Krause
Statens Serum Institut

Simon Feldbæk Kristensen
Danish Health and Medicines Authority

Estonia
Irina Dontsenko
Health Board

Olga Sadikova
Health Board

Finland
Jari Jalava
National Institute for Health and Welfare

France
Magid Herida
Institut de Veille Sanitaire

Germany
Andreas Gilsdorf
Robert Koch Institute

Annika Reuss
Robert Koch Institute

Greece
Asimina Balaska
Hellenic Center for Disease Control and Prevention

Georgia Spala
Hellenic Center for Disease Control and Prevention

Hungary
Zsuzsanna Molnar
National Center for Epidemiology

Iceland
Guðrún Sigmundsdottir
Centre for Health Security and Communicable Disease Control

Ireland
Derval Igoe
Health Protection Surveillance Centre

Joan O'Donnell
Health Protection Surveillance Centre

Israel
Eran Kopel
Ministry of Health

Shepherd Roee Singer
Ministry of Health

Italy
Maria Grazia Pompa
Ministry of Health

Latvia
Dita Heiberga
State Emergency Medical Service of the Republic of Latvia

Raina Nikiforova
Centre for Disease Prevention and Control of Latvia

Lithuania
Aukse Bankauskaite-Miliauskiene
Health Emergency Situations Centre of the Ministry of Health

Eglė Pauzaite
Centre for Communicable Diseases and AIDS

Montenegro
Ljijana Jovicevic
Primary Health Care Centre in Bar

Bozidarka Rakocevic
Institute of Public Health

Netherlands
André Jacobi
National Institute for Public Health and the Environment

Willem Van Der Hoek
National Institute for Public Health and the Environment

Norway
Karin Nygård
Norwegian Institute of Public Health

Portugal
Graça Gregorio De Freitas
Directorate-General of Health

Paula Valente
Directorate-General of Health

Republic of Moldova
Natalia Caterinciuc
National Centre for Public Health

Vladimir Guriev
National Centre for Public Health

Romania
Rodica Popescu
National Institute of Public Health

Lavinia Zota
National Institute of Public Health

Serbia
Dragana Dimitrijevic
Institute of Public Health

Bojana Grgic
Institute of Public Health

Slovakia
Edita Staronova
Public Health Authority

Alexandra Zampachova
Public Health Authority

Slovenia
Neda Hudopisk
Public Health Institute Ravne

Maja Sočan
National Institute of Public Health

Spain
Amparo Larrauri
National Centre of Epidemiology, Carlos III Health Institute

María José Sierra Moros
Ministry of Health, Social Policy and Equality

Sweden
Mikael Magnusson
National Board of Health and Welfare

Anders Wallensten
Swedish Institute for Communicable Disease Control

Switzerland
Heinrich Lehmann
Federal Office of Public Health

Stefanie Schmied
Federal Office of Public Health

The former Yugoslav Republic of Macedonia
Zarko Karadzovski
Republic Institute for Health protection

Zvonko Milenkovik
Clinic of Infectious Diseases and Febrile Conditions

Turkey
Ali Kösekahya
Public Health Institute

Mustafa Bahadır Sucakli
Public Health Institute

United Kingdom of Great Britain and Northern Ireland
Nick Phin
Public Health England

Consultants

Janna Klein Breteler
WHO Regional Office for Europe

Theodor Ziegler
WHO Regional Office for Europe

Observers

United Nations Interim Administration Mission in Kosovo
Dafina Gexha
Institute of Public Health

Pranvera Kaçaniku-Gunga
Institute of Public Health

Representatives of organizations

European Centre for Disease Prevention and Control
Massimo Ciotti
Anne-Sophie Desprez
Pasi Penttinen
René Snacken
Jonathan Suk
Thomas Van Cangh

European Commission
Franz Karcher

United States Centers for Disease Control and Prevention
Angela Schwartz

World Health Organization

Regional Office for Europe
Caroline Brown
Michala Hegermann-Lindencrone
Thomas Hofmann
Giorgia Knechtlin
Gerald Rockenschaub

Headquarters
Anthony Wayne Mounts
Adrienne Rashford