

# **Joint WHO Regional Office for Europe/ECDC Meeting on Influenza Surveillance**

REPORT

**29–31 May 2013, Istanbul, Turkey**

## ABSTRACT

During the third joint WHO European Regional Office for Europe/ECDC annual influenza surveillance meeting, 150 national focal points for epidemiological and virological surveillance constituting the WHO European Region and European Union/European Economic Area influenza surveillance network, reviewed the 2012/2013 influenza season, the response to the emergence of Middle East respiratory syndrome coronavirus and avian influenza A(H7N9), and new developments related to pandemic influenza risk assessment, influenza vaccines and antiviral use. The network continues to make a major contribution to global and regional influenza and other respiratory pathogen surveillance, risk assessment and response. Improvements to regional surveillance and response can be made by better description and interpretation of surveillance of severe disease due to influenza and by the development of outbreak response plans for the network.

### Keywords

Communicable diseases and their control  
Disease outbreaks  
Influenza  
Influenza vaccine  
Pandemics  
Surveillance

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## Introduction

The WHO Regional Office for Europe (WHO/Europe) and the European Centre for Disease Prevention and Control (ECDC) coordinate the surveillance of influenza and other emerging respiratory viruses in the WHO European Region. On 29–31 May 2013, WHO/Europe and ECDC held their third joint annual meeting for over 150 participants representing epidemiological and virological surveillance of influenza in 50 of 53 WHO European Region and European Union (EU)/European Economic Area (EEA) Member States. Participating countries and influenza focal points are listed in Annex 2 and on the EuroFlu website ([http://euroflu.org/cgi-files/wiw\\_members\\_display.cgi](http://euroflu.org/cgi-files/wiw_members_display.cgi)).



The meeting was hosted by the Ministry of Health of Turkey and opened by Guenael Rodier, Director, Division of Communicable Diseases, Health Security and Environment, on behalf of WHO/Europe and Denis Coulombier, Head of Unit for Surveillance and Response Support, on behalf of ECDC. Mr Coulombier pointed out that 2012/2013 had been a 'busy season' because of the need to perform surveillance for seasonal influenza as well as to be prepared to detect cases of the recently emerged Middle East respiratory syndrome coronavirus (MERS-CoV) and avian influenza A(H7N9). This highlighted the importance of continued surveillance for influenza and other emerging respiratory pathogens with pandemic potential. The cooperation and collaboration of WHO/Europe, ECDC, the European Influenza Surveillance network (EISN), Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) and the EuroFlu network was acknowledged and they were recognized for their efforts.

For the first time at the joint surveillance meeting, 2 poster sessions with a total of 26 posters were held, covering a range of topics including the results of national surveillance activities for influenza and other respiratory pathogens, assessing the effectiveness of school closure for the control of influenza, modelling and e-based learning modules for health care workers on influenza disease, diagnostics, treatment options and preventive measures.

This report summarizes the key topics of discussion relevant to further strengthening influenza surveillance and seasonal influenza vaccination programmes and preparedness for emerging respiratory viruses such as MERS-CoV and A(H7N9). Simultaneous Russian/English translation was provided throughout the meeting.

Presentations from this meeting will be available in English and Russian on the ECDC website (<http://www.ecdc.europa.eu/en/Pages/home.aspx>), in the password-protected areas of the EuroFlu library and ECDC extranet. For more information about this meeting, please contact [influenza@euro.who.int](mailto:influenza@euro.who.int) and [influenza@ecdc.europa.eu](mailto:influenza@ecdc.europa.eu).

## Objectives

The joint WHO/Europe/ECDC annual influenza meeting provides a forum to Member States participating in regional influenza surveillance to discuss developments and identify gaps in influenza surveillance and influenza vaccination, from the country, regional and global perspective. International partners and institutions (listed in Annex 2) are invited to provide input on the range of issues covered.

Strengthening the European network is paramount for WHO/Europe and ECDCs' collaboration with Member States, on routine as well as critical and urgent issues, such as the recent emergence of MERS-CoV and A(H7N9). An important objective of this year's annual meeting was therefore to review the risk posed by these two events to countries in the WHO European Region and to identify gaps in preparedness.

A third objective was to obtain feedback on the WHO/Europe and ECDC seasonal influenza bulletins, respectively the EuroFlu bulletin and the Weekly Influenza Surveillance Overview (WISO).

## Main conclusions and recommendations

- **Outbreak and response capacities:** An emergency response plan for the network should be developed by WHO/Europe and ECDC. In addition, WHO/Europe and ECDC will continue to support Member States through the rapid provision of guidance, risk assessment and laboratory supplies during outbreaks, as well as training and external quality programmes for National Influenza Centres (NICs).
- **Pandemic risk assessment:** WHO/Europe and ECDC will assist Member States to adapt and further implement pandemic influenza risk management guidance at the national level, revise national pandemic preparedness plans taking into consideration the WHO pandemic influenza risk management guidance, and assist with sero-epidemiological surveys for risk assessment.
- **Influenza vaccine:** WHO/Europe and ECDC will continue to support Member States' efforts to conduct and expand where feasible seasonal influenza vaccination programmes, and to monitor seasonal influenza vaccine effectiveness and safety.
- **Regional surveillance:** WHO/Europe and ECDC will continue to work with Member States to improve key surveillance outputs (the WHO/Europe EuroFlu bulletin and ECDC WISO), particularly the analysis and interpretation of data on severe disease due to influenza.
- **Influenza virus sharing:** Virus sharing within the WHO Global Influenza Surveillance and Response System (GISRS) will continue to be monitored and ways to improve the timeliness of sharing with respect to the WHO Vaccine Composition Meetings will be sought.

## Summary of session discussions

### Outbreaks and response

In the last year the global community has had to respond to two new respiratory disease outbreaks constituting public health threats. On 31 March 2013, the health authorities of China notified WHO of three laboratory-confirmed human cases of avian influenza A(H7N9) virus infection. These cases reported from China are the first known cases of human infection with A(H7N9). Since that time China has continued to report new human cases and as of 24 May 2013, 131 laboratory-confirmed human cases with A(H7N9) virus including 36 fatalities had been reported from eight provinces.

As of 28 May 2013, there had been 44 laboratory-confirmed cases of human infection with MERS-CoV, including 22 deaths. Several countries in the Middle East have been affected, including Jordan, Kingdom of Saudi Arabia (KSA), the United Arab Emirates (UAE) and Qatar. Cases had also been reported by three countries in Europe: France, Germany and the United Kingdom. All of the European cases had a direct or indirect connection to the Middle East. However, in France and the United Kingdom, there had been limited local transmission among close contacts which had not been to the Middle East but had been in contact with a traveller recently returned from the Middle East.

For this reason the Outbreaks and Response session focussed on providing the participants with an update of the current situation regarding MERS-CoV and A(H7N9), discussing lessons learnt from the outbreak response, identifying gaps and discussing the way forward including improving awareness of activities at the animal-human interface regarding A(H7N9) investigations.

The roundtable panel highlighted the importance of epidemiologic investigations in the field in order to identify the reservoir in new outbreaks and provide information for rapid severity assessments. It was noted that WHO/Europe and ECDC have training programmes and the ability to assist countries at short notice. Prompt communication was identified as a key component of outbreak response with an emphasis on combined, consistent and simple messaging and recommendations. The Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (OIE) have worked together to build lab capacity and in the area of strategy and policy. A major shortcoming is the limited financial resources available for capacity building: there is a need to mobilize resources for increased and improved surveillance.

WHO is developing travel guidance related to the October 2013 Hajj, in close collaboration with the Kingdom of Saudi Arabia. It will be important to closely monitor returning pilgrims to European countries and update guidance as necessary. WHO has also issued risk management guidance, which includes generic actions that can be pursued in outbreaks of acute infectious respiratory disease.

### Conclusions and recommendations

Member States should maintain, and strengthen where needed, their emergency response capacities to investigate respiratory outbreaks and to provide information for rapid severity assessments. This includes prompt communication within countries and close coordination with the animal health sector. WHO/Europe and ECDC will continue to assist countries by providing training, support during outbreak response, risk assessment and guidance, and by developing an emergency response plan.

### Assessing risk and severity of influenza viruses

The emergence and recognition of a series of new animal influenza viruses since 2009, influenza

A(H1N1)pdm09, influenza A(H3N2)v and most recently influenza A(H7N9), has spurred interest in the early assessment of viruses of animal origin as to their pandemic potential and specifically whether they deserve the considerable investment required for pre-emptive development of human diagnostics and the early development of vaccines for humans (beyond the usual identification of candidate vaccine viruses).

The most developed tool for this is the Influenza Risk Assessment Tool (IRAT) designed by the United States Centers for Disease Control and Prevention (CDC) with input from WHO collaborating centres, veterinary experts and European subject matter experts. This has been used to inform national United States decision-making on diagnostics and vaccine development for influenza A(H3N2)v and influenza A(H7N9). Another tool, FluRisk, has been developed in Europe supported by the European Food Safety Authority (EFSA) with the aim of assessing the risk of animal influenza viruses being able to cross species barriers. This session aimed to gain a better understanding of how the IRAT tool (complemented by FluRisk) might be deployed in Europe, or Europe could contribute to a more global approach.

The IRAT is a prioritization tool, and can be used to provide input into decisions. As such it is offered to the international influenza community as a tool to assess new, emerging viruses—using subject matter experts. IRAT is still under development and there are opportunities for European experts to provide input, which requires active engagement and responsiveness. Discussions included details on how bringing experts together will make the ranking more robust and complete as the IRAT is meant to be internationally relevant. Participants agreed that European countries can help fill the gaps that have been identified and prioritized by the IRAT, particularly those related to information. This tool is also a means to facilitate intersectoral collaboration and communication. Also it was felt that it would be useful to establish a joint database for human and animal influenza viruses and a single database for sharing research information. In summary, this group would be keen to contribute to the further development of the IRAT such as with expert groups and gap filling and was interested in implementing the tool.

While many participants agreed on the importance of using a standard approach, there was no consensus on what that approach should be. Positive aspects of the IRAT included its transparency and involvement of expert opinion from far and wide. It is a way to bring information to bear that does not always get published. FluRisk, on the other hand, is more quantitative and demands more known data in order to run a formula. It addresses mostly the animal side and involves complex details about animal influenza viruses, which is a challenge for interpretation. If FluRisk results are similar to IRAT, there is a cross-validation, which would be of value.

The IRAT and FluRisk tools deal mainly with assessing the likelihood of an influenza virus gaining the potential to cause a pandemic. Once such a pandemic virus emerges and starts to spread, it is important to assess its severity and so judge the responses that will be proportionate. A number of complementary approaches are being developed for this under the overall guidance of WHO. Methods of estimating severity are integral to WHO's 2013 *Interim guidance on pandemic influenza risk management*. It is recognized that approaches to pandemic severity assessment will benefit from applying assessments to seasonal influenza on an annual basis.

The new WHO guidance on pandemic risk management puts the onus on countries to base their preparedness and response activities on continuous national risk assessment. It was discussed whether or not WHO should actually declare a pandemic: many countries indicated that this declaration is necessary for them to effectively manage the risk, in particular the use of pandemic vaccine. WHO guidance during a pandemic needs to be produced faster and be less ambiguous.

### **Conclusions and recommendations**

WHO/Europe and ECDC will assist Member States to adapt and further implement pandemic



influenza risk management guidance at the national level, revise national pandemic preparedness plans taking into consideration WHO pandemic influenza risk management guidance, and assisting with the implementation of sero-epidemiological surveys for risk assessment.

## **Current and future influenza vaccines and their use in vaccination programmes**

Vaccination remains the current most effective means of preventing seasonal influenza infection. Yet, numerous challenges remain including low vaccination uptake in key target groups in many countries of the Region, varying vaccine effectiveness by season, by vaccine and by target groups, and a lengthy production process of influenza vaccines.

Recent developments and future possibilities for seasonal and pandemic influenza vaccines were presented to provide an overview of the diversity of vaccines and the strategies for use. Significant developments concerning seasonal and pandemic vaccines have taken place during the last few years; examples include quadrivalent vaccines, adjuvanted seasonal and pandemic vaccines for all age groups, the first trivalent influenza vaccine using insect virus (baculovirus) expression system and recombinant DNA technology, and progress towards development of universal influenza vaccines. Furthermore, the first attempts to develop vaccine candidates for the novel influenza A(H7N9) have started. Maintaining support for the development and use of more effective manufacture processes for influenza vaccines is critically needed.

The call for better influenza vaccines was also highlighted in a summary of a number of studies on seasonal influenza vaccine effectiveness (VE) in Europe (I-MOVE) conducted between 2007/2008 and 2012/2013 showing sub-optimal VE in certain years and population groups.

Despite long-standing recommendations on seasonal influenza vaccination in the elderly (and other risk groups), seasonal influenza vaccination uptake is low in many Member States according to annual surveys performed by the VENICE collaboration since 2007. The surveys have also shown that monitoring of influenza vaccination coverage in the various target groups (with the exception of the elderly) is limited, impeding evaluation of the impact and performance of the national influenza immunization programmes. Increasing vaccination coverage among the elderly and other risk groups requires a better understanding of the barriers to and motivators for influenza vaccination. WHO/Europe is currently piloting a project on increasing vaccination uptake in specific target groups based on behaviour change theories (Tailoring Immunization Programmes (TIP)).

Global recommendations on influenza vaccination include children. Currently, only few countries in the Region have implemented seasonal influenza vaccination for children and uptake is low in the countries that have. The United Kingdom presented a strategy for introducing an influenza intranasal vaccine programme for school children along with results of disease transmission modelling and cost effectiveness studies to support the implementation.

ECDC has developed and piloted a toolkit in support of vaccination campaigns in risk groups and health care workers. The tool kit was displayed at the meeting and is now available for use by Member States.

## **Conclusions and recommendations**

Yearly influenza vaccination campaigns for elderly, medical risk groups and health care workers should be supported in Member States (MS) according to national priorities and in line with recommendations by WHO, the Strategic Advisory Group of Experts on immunization (SAGE) and

the Council of the European Union. It is essential to collect influenza vaccination coverage data to monitor national influenza immunization programmes. Strategies for using currently available seasonal influenza vaccines for optimal effect should be explored as exemplified by the pilot programme in the United Kingdom where children aged 6 months–18 years will be offered intranasal live attenuated influenza vaccine.

## **Regional surveillance and virus sharing**

This session provided an opportunity for Member States to discuss the various information products provided by WHO/Europe and ECDC (EuroFlu, WISO, WHO/Europe Flu Focus, the ECDC monthly virology reports, ECDC Influenza & Other Respiratory Viruses Digest and risk assessments) and to suggest improvements. Specific feedback was sought on the changes made to the EuroFlu bulletin in 2012/2013 to improve graphical outputs and interpretation of surveillance data, and on new data presentations in WISO, such as infographics summarizing influenza surveillance data launched by ECDC in 2013 and the use of social media.

There was general consensus among participants that WISO and EuroFlu provide useful and timely information on influenza for the EU/EEA countries and the Region. Understanding the influenza situation in neighbouring countries and the spread across the Region was highlighted as an important asset of the surveillance network by participants. Suggestions for improvements included: a more comprehensive interpretation of weekly epidemiological and virological data and changes over time, separating presentation of sentinel and non-sentinel virological data, adding options for reporting other respiratory viruses on the platforms, providing descriptions of the national surveillance systems (including case definitions, sampling strategy, type of surveillance), standardization of case definitions, adding a short summary about situation in neighbouring regions (e.g. Asia), and providing more detailed analysis and interpretation of severe disease data.

A critical activity undertaken by NICs in the European Influenza Surveillance Network (EISN) and EuroFlu networks is the sharing of viruses with the WHO collaborating centres for influenza reference and research (WHOCCs) within the GISRS. This makes an important contribution to WHO vaccine strain selection recommendations (VCM). Analysis of the timeliness and geographic and epidemiological characteristics of viruses submitted during the 2010/2011 and 2011/2012 influenza seasons demonstrated that countries in the WHO European Region share a large number of viruses annually (>1000) representing different age groups, severe and mild cases, and different subregions. However, a large proportion of viruses is not submitted in time for the northern hemisphere VCM and some subregions are underrepresented. This is partly due to the fact that in the European Region, the influenza season does not usually start till late January or the beginning of February.

Improvements in timeliness could be made by providing an exact shipment deadline, allowing countries with "early" influenza seasons to make two shipments instead of one and encouraging NICs to ship influenza-positive clinical specimens if there is insufficient time to isolate virus. Moving back the February VCM by three weeks and more specific guidance from WHO on which viruses to share for VCM is needed. To encourage all NICs to routinely share viruses, participants requested that the United Kingdom WHOCC make an end-of-season report that includes all countries that shared viruses and that WHO send an official letter to ministries of health highlighting the need to share influenza viruses with WHO. The WHO shipment fund project should consider shipping viruses on ice rather than dry ice to cut costs and thus increase the number of shipments covered by WHO.

## **Conclusions and recommendations**

WHO/Europe and ECDC will continue to improve the EuroFlu bulletin and WISO based on the feedback received during the meeting, to improve the influenza surveillance data that is disseminated to the network, partners and the public. They will work on obtaining an overview of

country influenza surveillance systems to aid the interpretation of data, particularly related to severe disease associated with influenza. NICs should continue to share influenza viruses with WHOCCs and WHO should review its guidance on which viruses to share and by what deadline.

## **Epidemiology breakout session**

In Europe, influenza surveillance has traditionally focused on quantitative Influenza-like illness (ILI)/acute respiratory infection (ARI) data from primary care sentinel physicians and qualitative indicators like intensity, geographic spread and trend to describe influenza activity in a given season. However, since the 2009 pandemic, surveillance of hospitalized influenza cases has been implemented in a number of countries to capture the severe end of the disease spectrum. This has been complemented by weekly all-cause mortality monitoring, coordinated by the EuroMOMO project. The real burden of influenza, however, remains difficult to estimate.

The different national surveillance systems for severe influenza and severe acute respiratory disease, including their use (usefulness) and limitations were presented by participants and discussed in small groups. Participants highlighted the following as important values of the surveillance systems: 1) data can assist in identifying target groups for immunization; 2) it can assist in the communication about severity of the influenza season with media and health care professionals during the season; 3) surveillance of severe respiratory disease may help detect unusual events, and information from surveillance activities can assist in 4) planning hospital surge capacity, 5) the burden of disease and 6) cost of influenza/severe acute respiratory infection (SARI) in hospitals.

The main limitations of current surveillance systems emphasized during the discussions were: 1) difficulties in establishing burden of influenza relative to all SARI cases as patients testing negative for influenza are not recorded in a number of countries; 2) challenges to establish a baseline for severe influenza as reliable patient population denominator figures are difficult to obtain; 3) missing data (lack of reporting, incomplete data); 4) lack of long-term funding; and 5) standard case definitions used for surveillance purposes are not in ICD, resulting in an additional reporting burden and misunderstanding among clinicians.

A number of suggestions on how to improve current surveillance for severe influenza and respiratory disease at national level were proposed. It was felt that objectives of the surveillance system should be clear, including a specification of information required in the short term versus long-term research. Definition of a set of minimum standard variables to be collected in the system is also needed. Also, participants felt that when a country first introduces surveillance for severe influenza/SARI, it should pilot the surveillance on a small scale first, and adjust and expand if it is sustainable. Some countries with a large number of sites may need to scale down in order to improve data quality. However, maintaining representativeness is important. It was also felt that introducing or improving the use of electronic registration and reporting would be very helpful so that data can be extracted automatically. Enhancing collaboration and communication channels between clinicians and epidemiologists is also considered to be a factor in improving surveillance, such as ensuring feedback of the results to the physicians providing the data (providing a weekly bulletin summarizing the data from reporting hospitals is used as incentive in some countries). Other incentives for clinicians include additional trainings, participation at conferences, seminars and roundtable discussions.

The use of severe disease data at European level including presentation of data in the two regional bulletins (WISO and EuroFlu) was also discussed. A number of countries found that the presentation of severe disease data from neighbouring countries could be helpful in predicting the severity of the season, including unusual events. Nevertheless, participants stressed that

summarizing data from severe disease surveillance across countries had a number of limitations and made pooling of data for analysis less useful, including disparities in surveillance systems (e.g. sentinel vs. universal surveillance, intensive-care unit (ICU) vs. non-ICU), case definitions (e.g. SARI vs. laboratory-confirmed influenza, use of ICD code for case classification), selection strategies for respiratory testing, and populations served by the hospitals participating in the surveillance systems.

A number of suggestions for WHO/Europe and ECDC on how to improve severe disease surveillance on a regional level were proposed. A general recommendation was that WHO/Europe and ECDC review their respective bulletins in order to improve the presentation of severe influenza data including a stronger focus on analysis/interpretation of data rather than the presentation of raw data. It was also recommended that WHO/Europe and ECDC provide clear guidance on the data set needed for severe disease reporting and clarify the objectives of regional surveillance for severe disease. A comprehensive description of the systems currently in place which also highlight strengths and limitations of the different models being used would help identify steps for developing guidance for severe disease surveillance due to influenza and develop appropriate surveillance objectives. Another suggestion was that more emphasis should be placed on national perspectives for interpretation of data in order to better understand an unusual situation in a given country.

### **Conclusions and recommendations**

WHO/Europe and ECDC should review their respective bulletins in order to improve the presentation of severe influenza data including a stronger focus on analysis/interpretation of data rather than the presentation of raw data. Clarification of the objectives of regional surveillance for severe disease and clear guidance to the Member States on the data set needed for severe disease reporting should be developed. This would be facilitated by a comprehensive description of the systems currently in place which highlights strengths and limitations of the different models being used.

### **Virology breakout session**

WHO/Europe and ECDC coordinate laboratory surveillance and laboratory capacity strengthening activities through networks of nominated microbiologists, most of which work in the WHO-recognized NICs. In addition, EU/EEA Member States participate in the CNRL coordinated by the ECDC, renamed European Reference Laboratories for Influenza Network (ERLI-Net) 1 June 2013. The objectives of the session were to review and discuss issues related to virus isolation and characterization, network capacities including those required to respond to novel respiratory viruses such as A(H7N9) and MERS-CoV, and progress with the Consortium for the Standardization of Influenza Seroepidemiology (CONSISE).

Isolation of influenza viruses by NICs which are subsequently shared within the GISRS forms one of the cornerstones of global influenza surveillance. In the past season, influenza A(H3N2), A(H1N1)pdm09, influenza B Yamagata and Victoria lineages co-circulated and generally virus isolation rates were good. However, isolation of A(H3N2) viruses in Madin-Darby canine kidney (MDCK) cells still poses problems due to selective amino acid substitutions in the neuraminidase gene (N2), which enables the neuraminidase to contribute to the agglutination of red blood cells leading to misleading hemagglutination inhibition assay (HAI) results. These effects may be mitigated by the use of oseltamivir or zanamivir in HAI and by isolating viruses on MDCK-sialyltransferase (SIAT1) cells, although A(H3N2) isolates may not be stable upon repeated passage in these cells.

The emergence of two respiratory viruses causing severe disease in humans in 2012 (MERS-CoV) and 2013 (A(H7N9)) has again highlighted the importance of maintaining and developing

laboratory capacities as well as sharing expertise within the European influenza laboratory network to improve the ability to respond to novel threats in a timely and efficient manner. In order to maintain laboratory capacities and define training needs, external quality assessment (EQA) programmes are organized by WHO and ECDC. The results from the latest global WHO External Quality Assessment Programme (EQAP) panel show a high level of performance in PCR among laboratories. In the autumn of 2013, an additional EQA will be conducted for virus culture and antiviral susceptibility testing among European laboratories. The CNRL Training Needs Assessment Questionnaire identified future priorities for training among NICs in EU/EEA countries as well as twinning activities.

Participants discussed how laboratories can maintain and improve their capacity to detect novel respiratory viruses, and reviewed the response of the European network including support provided by ECDC, the CNRL, WHO/Europe and the WHOCC Regional Research Institute (RRI), National Institute for Medical Research, London. Participants expressed appreciation for the support within and from the network, in particular the immediate provision of the real time reverse transcription-polymerase chain reaction (RT-PCR) protocols for the detection of A(H7N9), timely information about A(H7N9) sequences, and rapid distribution of positive control material and CDC RT-PCR kits. However, challenges remain including a lack of information on how to validate PCR protocols, administrative delays in receiving CDC kits (registration to the CDC platform, obtaining import permits, customs clearance) and a lack of other laboratory supplies and biosafety level-3 facilities in some laboratories. In some countries, clinicians did not receive guidelines on which specimens to collect, and in-country transport of specimens from suspected cases occurring in hospitals other than sentinel sites was not arranged. It also took time to translate information into local languages.

In order to ensure that a long-term plan is in place to increase and maintain laboratory capabilities, to better utilize the virological data generated by the network and to strengthen the public health outputs for routine surveillance as well as the response to emerging viruses, strategic objectives for the laboratory network are being defined. A joint document is being developed by the ERLI-Net coordination, ECDC and WHO/Europe, after which network members will be invited to comment. The document will take into account the requirements of NICs to comply with the Pandemic Influenza Preparedness (PIP) Framework, which was developed by Member States and became effective in 2011. It aims to improve and strengthen the sharing of influenza viruses with human pandemic potential and to increase the access of developing countries to vaccines and other pandemic related supplies.

CONSISE is a global partnership aiming to standardize influenza seroepidemiology and develop comprehensive influenza investigation protocols to inform public health policy. It has developed into a consortium of two interactive working groups (epidemiology and laboratory) to develop seroepidemiological investigation protocols, laboratory protocols and international serology standards.

### **Conclusions and recommendations**

To improve the laboratory network's capacities to rapidly detect novel respiratory viruses, WHO/Europe and ECDC should improve communication regarding the availability of reagents and controls, make recommendations as to which diagnostic assay is recommended to use for testing, improve contacts to animal laboratories and provide training of laboratory staff. In addition, the laboratory network strategy should include a laboratory network outbreak response plan with a clear division of roles and responsibilities for WHO/Europe, ECDC and the laboratory network.

## Meeting evaluation

More than 150 representatives attended the meeting, of which 35 to 99 answered any of the 9 questions included in the meeting evaluation report questionnaire. The meeting was very well received as ratings of excellent or good were given for the overall quality of the meeting (over 70% of respondents or 99 persons), to the overall technical content (almost 70% of respondents or 98 persons) and to the overall administrative organization of the meeting (over 80% of respondents or 99 persons). However, for future meetings, WHO/Europe and ECDC should ensure that background documents are provided beforehand to allow participants to prepare, that sufficient time is available for discussion of the presented topics, that there is sufficient focus on network issues, that more countries are able to present their data and that there is better involvement of participants from all parts of the Region.

## Resources

### WHO Regional Office for Europe

EuroFlu bulletin  
<http://euroflu.org/>

Influenza health topic  
[www.euro.who.int/en/health-topics/communicable-diseases/influenza](http://www.euro.who.int/en/health-topics/communicable-diseases/influenza)

Guide to tailoring immunization programmes (TIP )  
<http://www.euro.who.int/en/health-topics/communicable-diseases/rotavirus/publications2/2013/guide-to-tailoring-immunization-programmes>

### WHO headquarters

Influenza health topic  
[www.who.int/en/](http://www.who.int/en/)

Pandemic influenza risk management: WHO interim guidance  
[http://www.who.int/influenza/preparedness/pandemic/influenza\\_risk\\_management/en/](http://www.who.int/influenza/preparedness/pandemic/influenza_risk_management/en/)

Pandemic influenza preparedness framework  
[www.who.int/influenza/pip/en/](http://www.who.int/influenza/pip/en/)

### ECDC

Weekly Influenza Surveillance Overview (WISO)  
[http://ecdc.europa.eu/en/healthtopics/seasonal\\_influenza/epidemiological\\_data/pages/weekly\\_influenza\\_surveillance\\_overview.aspx](http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/epidemiological_data/pages/weekly_influenza_surveillance_overview.aspx)

Influenza health topic, ECDC  
<http://ecdc.europa.eu/en/healthtopics/influenza/Pages/index.aspx>

Annual seasonal flu risk assessment  
[http://ecdc.europa.eu/en/healthtopics/seasonal\\_influenza/assessments/Pages/assessments.aspx](http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/assessments/Pages/assessments.aspx)

Communication tool kit

[http://ecdc.europa.eu/en/healthtopics/seasonal\\_influenza/communication\\_toolkit/Pages/communication\\_toolkit.aspx](http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/communication_toolkit/Pages/communication_toolkit.aspx)

### **Other resources**

CDC Influenza Risk Assessment Tool (IRAT)

<http://www.cdc.gov/flu/pandemic-resources/tools/risk-assessment.htm>

European Food Safety Authority

[www.efsa.europa.eu](http://www.efsa.europa.eu)

European monitoring of excess mortality for public health action (EuroMomo)

[www.euromomo.eu](http://www.euromomo.eu)

FluRisk

[http://www.izsvenezie.it/index.php?option=com\\_content&view=article&id=1203&Itemid=629](http://www.izsvenezie.it/index.php?option=com_content&view=article&id=1203&Itemid=629)

I-MOVE

<https://sites.google.com/site/epiflu/>

Vaccine European New Integrated Collaboration Effort (VENICE)

<http://venice.cineca.org>

## Annex 1: AGENDA

Joint ECDC and WHO European regional  
influenza surveillance meeting,  
29–31 May 2013, Istanbul, Turkey

Original: English

### PROVISIONAL PROGRAMME

#### Wednesday, May 29

##### **Opening Session**

- 9:00 – 9:05 Welcome and opening of the meeting  
9:05 – 9:15 Introduction: WHO Regional Office for Europe  
(*Guenael Rodier*) and ECDC (*Denis Coulombier*)  
9:15 – 9:30 Influenza surveillance in Turkey  
(*Ali Kösekahya, Communicable Diseases Department, Turkey*)  
9:30 – 9:50 The 2012-2013 influenza season in the European Region  
(*Caroline Brown, WHO/Europe; René Snacken, ECDC*)  
9:50 – 10:10 WHO Collaborating Centre for Reference and Research on Influenza:  
the 2012-2013 season  
(*John McCauley, WHO Collaborating Centre*)  
10:10 – 10:30 Estimating global and European mortality: what have we learned  
from the 2009 pandemic?  
(*Julia Fitzner, WHO Headquarters*)

##### **Outbreak and Response**

- 11:00 – 11:15 H7N9 situation update: what do we know and not know?  
(*René Snacken, ECDC*)  
11:15 – 11:35 Respiratory disease outbreak response: lessons from MERS-CoV &  
A(H7N9) and the way forward  
(*Julia Fitzner, WHO Headquarters*)  
11:35 – 12:00 Influenza and the human-animal intersect: what do we know and  
how do we work together?  
(*Mia Trochetti, United States Department of Agriculture*)  
12:00 – 12:30 Roundtable discussion on outbreak, respiratory surveillance and  
response issues  
(*René Snacken, ECDC; Caroline Brown, WHO/Europe; Mia Trochetti,  
USDA; Julia Fitzner WHO Headquarters; and invited participants*)

##### **Risk Assessment**

- 13:30 – 14:15 Influenza virus pandemic risk assessment: the influenza risk  
assessment tool (IRAT)  
(*Susan Trock, US Centers for Disease Control and Prevention*)  
14:15 – 14:30 FluRisk  
(*Per Have, European Food Safety Authority*)  
14:30 – 14:40 WHO Pandemic Influenza Risk Management Guidance  
(*Julia Fitzner, WHO Headquarters*)  
14:40 – 15:30 **Small Group Discussions:** Influenza risk assessment  
(*Groups to be determined*)



**Use of surveillance data**

- 16:00 – 16:15 Influenza A(H1N1)pdm09 virus as the cause of lethal pneumonia in Russia, 2009-2012: epidemiological, biological, and genetic properties  
(*Elena Burtseva, Chief, Influenza Etiology and Epidemiology Lab, Russia*)
- 16:15 – 16:30 Results of the European SARI risk factor study  
(*Tamara Meerhoff, WHO Temporary Adviser*)
- 16:30 – 18:00 **Poster session**
- 17:30 – 18:30 **ECDC Training:** Flu LabCap demonstration (for ECDC virology participants)

**Thursday, May 30**

- 9:00 – 9:35 Influenza vaccines: recent developments and future possibilities  
(*Kari Johansen, ECDC*)
- 9:35 – 9:55 Vaccine coverage in the WHO/European Region: results from VENICE study  
(*Darina O'Flanagan, VENICE Project; Pernille Jorgensen, WHO/Europe*)
- 9:55 – 10:15 Vaccine effectiveness in the European Region  
(*Marta Valenciano, I-MOVE Network*)
- 10:15 – 10:30 The UK intranasal vaccine strategy  
(*Richard Pebody, Public Health England*)

**Regional surveillance and virus sharing**

- 11:00 – 11:15 EuroFlu updates, changes and platform issues  
(*Caroline Brown, WHO/Europe*)
- 11:15- 11:30 Updates from WISO and other outputs  
(*Julien Beauté, ECDC*)
- 11:30- 11:45 European regional contribution to the WHO vaccine consultation meeting: an evaluation of viruses shipped to the WHO Collaborating Centre, NIMR
- 11:45 – 12:30 **Small group discussions:** Surveillance and virus sharing  
(*Groups to be determined*)

**Breakout sessions**

<i>Epidemiology</i>		<i>Virology</i>	
13:30- 13:40	The WHO Burden of Disease Manual ( <i>Julia Fitzner, WHO Headquarters</i> )	13:30 – 14:30	<b>Poster Session</b>
13:40 – 13:50	EuroMoMo - results and future strategy ( <i>Anne Mazick, EuroMoMo</i> )	15:00 - 15:30	Influenza virus isolation and virus characterization for the 2012-2013 season ( <i>Rod Daniels, WHO Collaborating Centre</i> )
13:50 – 14:00	Evaluation of qualitative	15:30 – 15:45	Summary of CNRL task-group meeting

14:00 – 14:30	indicators at the regional level ( <i>Tamara Meerhoff, WHO Temporary Advisor</i> ) <b>Round-table discussion:</b> <i>Severe disease surveillance in the region</i> ( <i>Julien Beauté, ECDC; Diane Gross, WHO/Europe; Julia Fitzner, WHO Headquarters; invited participants</i> )	15:45 - 16:00	( <i>Eeva Broberg, ECDC</i> ) Progress with the Consortium for the Standardization of Influenza Seroepidemiology (CONWISE)
15:00 – 16:00	<b>Small group discussions –</b> Severe disease surveillance - Member State's perspective.	16:00 – 16:15	( <i>Othmar Engelhardt, CONWISE</i> ) Results of CNRL survey; CNRL&WHO/Europe laboratory training and EQA activities
16:00 – 17:00	<b>Poster session</b>	16:15 - 17:15	( <i>Theodi Ziegler, ECDC Advisor</i> ) <b>Small group discussions -</b> Rapid detection of variant influenza: how can we do better? Developing strategic objectives for influenza laboratories in Europe ( <i>Helena Rebelo de Andrade, Instituto Nacional de Saúde, Portugal</i> )
		17:15 - 17:30	

Friday, May 31

9:00 – 9:15	RSV surveillance in the European region ( <i>Jonathan Van Tam, WHO Collaborating Centre for Pandemic Influenza and Research</i> )
9:15 – 9:30	Respiratory viruses and influenza during 3 seasons, 2010-2013, in Portugal ( <i>Raquel Guiomar, Head of the National Influenza Reference Laboratory, National Institute of Health Portugal</i> )
9:30 – 10:00	Do antivirals work? A review of the literature, guidance and analysis of antiviral surveillance data ( <i>Jonathan Van Tam, WHO Collaborating Centre for Pandemic Influenza and Research</i> )
10:00 – 10:15	Pilot study: influenza virus sentinel detections by age - report of a one-off retrospective collection of 2012/13 sentinel influenza virus detections by age from voluntary providers ( <i>Julien Beauté, ECDC</i> )
<i>Closing session</i>	
10:45 – 11:00	Results of virology small group and round-table discussions
11:00 – 11:15	Results of epidemiology small group and round-table discussions
11:15 – 11:30	Results of risk assessment discussions
11:30 – 11:45	Closing of meeting ( <i>Caroline Brown, WHO/Europe; René Snacken, ECDC</i> )

## **Annex 2: LIST OF PARTICIPANTS**

### **Albania**

Esmeralda Meta, Dritan Ulqinaku

### **Armenia**

Shushan Sargsyan, Liana Torosyan

### **Austria**

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### **Azerbaijan**

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### **Bulgaria**

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### **Croatia**

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### **Czech Republic**

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### **Denmark**

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### **Estonia**

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Chief Specialist, Health Board, Laboratory of Communicable Diseases

### **Finland**

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### **Iceland**

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### **Israel**

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