I. Executive summary

EU Threats

Measles outbreak on a cruise ship - Mediterranean Sea - 2014
Opening date: 1 March 2014 Latest update: 6 March 2014

On 27 February 2014, Italy reported an outbreak of measles on board a cruise ship sailing in the north-western Mediterranean with regular port calls in Italy, Spain and France. As of 13 March 2014, 27 cases (22 laboratory confirmed and 5 probable) have been reported with onset from 20 February to 1 March. More than 800 crew members were vaccinated in response to the outbreak. Most cases were among the crew. Two unvaccinated infants were among the affected passengers. The outbreak has not been declared over and new cases among crew and passengers cannot be ruled-out. Epidemiological and molecular evidence suggest that the outbreak strain may be linked to the large and still ongoing measles outbreak in the Philippines.

Influenza - Multistate (Europe) - Monitoring 2013-2014 season
Opening date: 4 October 2013 Latest update: 27 February 2014

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter seasons and publishes the results on its website in the Weekly Influenza Surveillance Overview.

Update of the week
In week 10/2014, of the 28 countries providing clinical data, one country reported high-intensity influenza activity, nine reported medium intensity and 18 countries reported low-intensity influenza activity.
Non EU Threats

**Influenza A(H7N9) - China - Monitoring human cases**

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, 380 cases have been reported from China, including 116 deaths. No autochthonous cases have been reported from outside of China. Most cases have been unlinked and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak. Sustained person-to-person transmission has not been documented. Transmission has peaked in two distinct waves; during the winter months in 2013 and during the winter of 2013-2014. The reason for this pattern is not obvious. Since October 2013, 253 cases have been reported and the majority of these cases were reported from previously affected provinces or in patients who visited these provinces prior to onset of illness.

Update of the week
Between 7 and 13 March 2014, eight new cases of influenza A(H7N9) infection have been reported in China: six cases in Guangdong province and one case each in Jiangsu and Fujian provinces.

**Influenza A(H5N1) - Multistate (world) - Monitoring human cases**

The influenza A(H5N1) virus, commonly known as bird flu, is fatal in about 60% of human infections. Sporadic cases continue to be reported, usually after contact with sick or dead poultry from certain Asian and African countries. No human cases have been reported from Europe.

Update of the week
During the past month, eight new human cases of influenza A(H5N1) infection have been reported worldwide: five in Cambodia, two in China and one in Vietnam.

**Zika virus infection outbreak - The Pacific - 2013-2014**

There is an ongoing outbreak of Zika virus (ZIKAV) infection in the Pacific affecting several countries, including Easter Island, a territory administered by Chile. There is a simultaneous dengue outbreak in the region. The French Polynesian health authorities report a concurrent significant increase in neurological syndromes and autoimmune illnesses. The cause and possible links with Zika or dengue virus infections are being investigated.

Update of the week
The Zika virus (ZIKAV) outbreak has reached the Cook Islands. This is the first time that ZIKAV infection is reported in the country. As of 13 March 2014, there are 188 cases with zika-like symptoms including 19 confirmed cases. The first case was a returning traveller from Tahiti.

In French Polynesia there was one additional case of Guillain-Barré syndrome and one new case of another neurological complication since the last update. Since October 2013 and as of 7 March 2014, there are 8 633 suspected ZIKAV cases, 39 of which were reported during the past week.

In New Caledonia, as of 11 March 2014, 201 cases of ZIKAV infection have been recorded since November 2013, of which 169 are autochthonous cases.

On Easter Island, a territory administered by Chile, there is one confirmed case of ZIKAV and 40 suspected cases as of 7 March 2014.

**Chikungunya outbreak - The Caribbean, 2013-2014**

On 6 December 2013, France reported two laboratory-confirmed autochthonous cases of chikungunya in the French part of the Caribbean island of Saint Martin. Since then, local transmission has been confirmed in the Dutch part of Saint Martin, on Martinique, Saint Barthélemy, Guadeloupe, British Virgin Islands, Dominica, Anguilla and French Guyana. Aruba only reported imported cases. This is the first documented outbreak of chikungunya with autochthonous transmission in the Americas. As of 14 March 2014, there have been more than 12 000 probable and confirmed cases in the region. There have been four fatalities reported.

Update of the week
During the past week the number of new cases reported increased in some of the affected areas but at a lower rate than the previous weeks. No new affected areas or islands were reported. The islands affected are Saint Martin/Sint Maarten, Martinique, Saint Barthélemy, Guadeloupe, Virgin Islands (UK), Anguilla, Dominica, Aruba, Saint Kitts and Nevis and French Guiana in mainland South America. In some territories of the French Antilles, given the load of cases, the health authorities decided not to seek laboratory confirmation for all suspected cases.

**Middle East respiratory syndrome- coronavirus (MERS CoV) - Multistate**

Opening date: 24 September 2012  Latest update: 7 March 2014

Since April 2012, 191 laboratory-confirmed cases, including 82 deaths, of acute respiratory disease caused by Middle East respiratory syndrome coronavirus (MERS-CoV), have been reported by national health authorities. To date, all cases have either occurred in the Middle East, have had direct links to a primary case infected in the Middle East, or have returned from the Middle East. The source of the virus remains unknown but the pattern of transmission points towards an animal reservoir in the Middle East, from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission to close contacts and in hospital settings has occurred, but there is no evidence of sustained transmission among humans. MERS-CoV is genetically distinct from the coronavirus that caused the SARS outbreak.

-update of the week

Since the previous CDTR, two new cases have been reported in the Middle East. One of the cases is an 86 year old citizen of Riyadh, Saudi Arabia with no symptoms. The second case is a 68 year old man with comorbidities from the United Arab Emirates.

**Poliomyelitis - Multistate (world) - Monitoring global outbreaks**

Opening date: 8 September 2005  Latest update: 13 March 2014

Polio, a crippling and potentially fatal vaccine-preventable disease that mainly affects children, is close to being eradicated as a result of global public health efforts. Polio remains endemic in Afghanistan, Pakistan and Nigeria. Cases were reported from five non-endemic countries in 2013: Cameroon, Ethiopia, Kenya, Somalia and Syria.

-update of the week

During the past week, five new cases of wild poliovirus type 1 (WPV1) were reported to WHO, all with onset of symptoms in 2014.
**II. Detailed reports**

**Measles outbreak on a cruise ship- Mediterranean Sea - 2014**

**Epidemiological summary**

The two first known cases in this outbreak were among the crew and both had onset of disease on 20 February 2014. One of the two cases, a 27-year-old woman, disembarked in Genoa on 22 February and was hospitalised there on the same day. The Italian Ministry of Health was alerted to this case on 27 February through the laboratory surveillance system. By 27 February, when the ship docked in Civitavecchia, Italy, 23 crew members had developed symptoms of measles and it was no longer possible to isolate cases and exposed contacts on board the ship. Symptomatic crew members and their close contacts were then disembarked and isolated ashore. Nine crew members were hospitalised at the INMI Spallanzani and 56 were quarantined in a residential facility 100 km north of Civitavecchia.

Between 28 February and 1 March, after inspections by the Maritime Health Offices in La Spezia and Savona, one additional crew member was hospitalised at the Spallanzani hospital and ten crew members were quarantined in the above mentioned residential facility (nine from La Spezia and two from Savona).

The medical staff at the Rome–Fiumicino Office of USMAF (Maritime, Air and Frontier Health Office under the Italian Ministry of Health), which is also responsible for Civitavecchia, and experts on infectious diseases from the National Institute of Infectious Diseases (INMI) in Rome performed a thorough examination of the medical situation on board upon the ship’s arrival in Civitavecchia.

The cruise ship continued its route as scheduled after infected crew and their close contacts had been isolated on shore. On arrival in Marseille on 2 March, no clinical cases of measles or fever were reported among the passengers and crew on board. On 3 March, the Costa Pacifica was inspected by Port Health Officers in Barcelona, and no cases were detected. On 5 March 2014, the ship called at Palma de Mallorca, Spain and no new cases were detected. According to the information provided by the medical team on board and the medical log, no new suspected measles cases have been detected since 1 March 2014. In addition to the measles cases, one case of chickenpox was confirmed in a 4 year-old girl, who disembarked the ship with her parents in Savona on 1 March 2014 and another case of chickenpox was reported on 13 March.

**ECDC assessment**

Measles is a highly infectious disease and frequently results in outbreaks. Introduction of measles virus into confined groups, such as passengers and crew on a ship, can result in large and rapidly evolving outbreaks if vaccine uptake in the group is below the epidemic threshold. The most recent case associated with the Costa Pacifica outbreak is a passenger who developed symptoms on 1 March after having returned home. However, measles has a long incubation period, up to 21 days, and cases are contagious on average 4 days prior to onset of rash until 4 days after rash. This means that new cases may still be reported among crew and passengers.

**Actions**

ECDC published a Rapid Risk Assessment on 05 March 2014. Two ECDC experts were deployed to Rome where they have supported the Italian outbreak response team from 10 to 14 March 2014. The outbreak was described in detail in a Rapid Communication published in Eurosurveillance on 13 March. A report is under preparation that will describe the timeline of the actions taken by the different actors in the outbreak and identify and analyse the enabling and potentially delaying processes and conditions which influenced detection and control of the outbreak.

**Influenza - Multistate (Europe) - Monitoring 2013-2014 season**

**Epidemiological summary**

For week 10/2014:
- Of the 28 countries providing clinical data, Greece reported high-intensity influenza activity, nine reported medium intensity and 18 countries reported low-intensity influenza activity.
- Of the 899 sentinel specimens tested across 22 countries, 288 (32%) were positive for influenza virus. Of these, 279 (97%) were type A and 9 (3%) were type B.
- Six countries reported 206 hospitalised, laboratory-confirmed influenza cases, including 93 cases admitted to intensive care units (ICU).

Based on the various indicators for the influenza season, the status of the season varied considerably between EU/EEA Member States in respect to the phase of the epidemic, its intensity, and dominant subtype.

Web sources: WISO | ECDC Seasonal influenza | US-CDC health advisory | CDC Seasonal influenza | FluWatch, Canada | FluView, USA

**ECDC assessment**
The influenza season started in EU/EEA countries in week 2/2014.

**Actions**
ECDC will continue to produce the weekly influenza surveillance overviews during the northern hemisphere influenza season.

**Influenza A(H7N9) - China - Monitoring human cases**

**Epidemiological summary**
In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, human cases have continued to be reported, and as of 13 March 2014, there have been 388 laboratory-confirmed cases: Zhejiang (138), Guangdong (89), Shanghai (42), Jiangsu (42), Fujian (21), Hunan (17), Anhui (9), Jiangxi (5), Henan (4), Beijing (4), Guangxi (4), Shandong (2), Hebei (1), Guizhou (1), Jilin (1), Hong Kong (5), Taiwan (2) and one case reported in Malaysia imported from China.

Most cases have developed severe respiratory disease. One hundred and twenty-one patients have died (case-fatality ratio=31%).

Since October 2013, 253 cases were reported from Zhejiang (92), Guangdong (88), Fujian (16), Jiangsu (15), Hunan (14), Shanghai (8), Anhui (5), Beijing (2), Guangxi (4), Guizhou (1), Jilin (1), Taiwan (1) and Hong Kong (5). One exported case from China was diagnosed in Malaysia.

**Web sources:** Chinese CDC | WHO | WHO FAQ page | ECDC | Malaysian Ministry of Health

**ECDC assessment**
The continued transmission in one of the most densely populated areas in the world of a novel reassortant avian influenza virus capable of causing severe disease in humans, is a cause for concern due to the pandemic potential of the virus. Currently, the most likely scenario is that this remains a local although geographically widespread zoonotic outbreak, in which the virus is transmitted sporadically to humans in close contact with the animal reservoir, similar to the influenza A(H5N1) situation.

The fatal case of influenza A(H5N1) imported from China to Canada and the recent imported case of influenza A(H7N9) in Malaysia support the scenario that imported cases of influenza A(H7N9) may be detected in Europe. However, the risk of the disease spreading among humans following an importation to Europe is considered to be very low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation in Europe.

The risk of increased transmission of H7N9 viruses between humans is not negligible. European countries should continue to prepare for the possibility of future pandemics, including one caused by A(H7N9). Preparedness activities should include the precautionary development of early human vaccine candidates and increased monitoring of animal influenzas at the animal–human interface.

**Actions**
The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, including scientific research. ECDC is closely monitoring developments.

ECDC published an updated Rapid Risk Assessment on 26 February 2014.
ECDC published an *epidemiological update* on 7 February 2014.

ECDC published a guidance document for *Supporting diagnostic preparedness for detection of avian influenza A(H7N9) viruses in Europe* for laboratories on 24 April 2013.

Distribution of confirmed A(H7N9) cases by week of onset and severity, week 14/2013 to week 11/2014, China (n=388)

*Where the week of onset is unknown, the week of reporting has been used*
Distribution of confirmed A(H7N9) cases by age and gender, 31 March 2013 - 13 March 2014, China (n=383)

Source: ECDC SRS

*5 cases where age or gender is missing have been excluded
Influenza A(H5N1) - Multistate (world) - Monitoring human cases

Opening date: 15 June 2005
Latest update: 13 March 2014

Epidemiological summary

Since 14 February 2014, eight new human cases of influenza A(H5N1) infection have been reported worldwide: five in Cambodia, two in China and one in Vietnam.

From 2003 through to 13 March 2014, 660 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been reported worldwide from 16 countries. Of these cases, 389 have died (case fatality rate 58.9%).

Web sources: ECDC Rapid Risk Assessment | Avian influenza on ECDC website | WHO update | United Nations in Cambodia |

ECDC assessment
The risk of secondary cases in Europe is considered to be very low. Europeans travelling to China and South-East Asia should avoid live poultry markets and contact with chickens, ducks, wild birds and their droppings. This reduces the risk of exposure not only to A(H5N1) but also to A(H7N9). Poultry meat and eggs should be well cooked.

Hong Kong reported the world's first outbreak of bird flu among humans in 1997, when six people died. Most human infections are the result of direct contact with infected birds, and countries with large poultry populations in close contact with humans are considered to be most at risk of bird flu outbreaks. There are currently no indications of a significant change in the epidemiology associated with any clade or strain of the A(H5N1) virus from a human health perspective. This assessment is based on the absence of sustained human-to-human transmission, and on the observation that there is no apparent change in the size of clusters or reports of chains of infection. However, vigilance for avian influenza in domestic poultry and wild birds in Europe remains important.

**Actions**

ECDC follows the worldwide A(H5N1) situation through epidemic intelligence activities in order to identify significant changes in the epidemiology of the virus. ECDC re-assesses the potential of a changing risk for A(H5N1) to humans on a regular basis.

ECDC published a rapid risk assessment covering A(H5N1) and other human infections with avian influenza viruses in China on 26 February 2014.

WHO is now reporting H5N1 cases on a monthly basis. ECDC will continue monthly reporting in the CDTR to coincide with WHO reporting.

**Zika virus infection outbreak - The Pacific - 2013-2014**

Opening date: 9 January 2014  
Latest update: 6 March 2014

**Epidemiological summary**

The Zika outbreak started in October 2013 in French Polynesia and it is estimated that more than 30 000 cases have sought medical care with Zika-like symptoms there. The outbreak has since spread to other areas including a territory belonging to Chile. Public health control measures, including increased surveillance and the promotion of measures to avoid mosquito bites, have been implemented in the affected territories.

Health authorities in French Polynesia have reported a concurrent significant increase in neurological syndromes and autoimmune illnesses. There is a simultaneous dengue outbreak in the region. The cause of the complications and their possible links with ZIKAV or dengue virus infections are being investigated. No neurological complications have been reported to date in the other affected areas.

**Web sources:** ECDC fact sheet | Bureau de Veille Sanitaire | NaTHNac | DASS New Caledonia

**ECDC assessment**

ZIKAV infection continues to spread to new areas in the Pacific. There is a risk for the disease spreading further both in the Pacific and to the countries of the Americas where the *Aedes* mosquito is present, and for sporadic imported cases in Europe from endemic areas. Vigilance must be enhanced towards imported cases of ZIKAV infection in the EU Member States and EU overseas countries and territories and outermost regions, in particular where effective vectors are present. Early detection of cases is essential to reduce the risk of autochthonous transmission. Clinicians and medical travel clinics should be aware of the situation in the Pacific islands and include ZIKAV infection in their differential diagnosis.

There is no available vaccine against ZIKAV infection. Travellers can protect themselves by preventing mosquito bites.

ZIKAV infection is a mild illness and has not been known to have neurological complications. The reported complications in French Polynesia are not confirmed to be caused by ZIKAV infections. However, there is a temporal association with the simultaneous outbreaks of ZIKAV and dengue. It is important to determine the cause of this increase and a possible association with the ongoing transmission of DENV-1, DENV-3 and ZIKAV.
Actions
ECDC prepared a risk assessment on this event.

Distribution of suspected Zika infection cases in French Polynesia notified by sentinel network by week of reporting, as of week 09/2014
Distribution of suspected Zika infection cases in French Polynesia presenting with neurological and auto-immunes complications notified by sentinel network by week of reporting and, as of week 11/2014

Bureau de Veille Sanitaire, Polynésie Française

Epidemiological summary
Cases reported as of 14 March 2014:

- Virgin Islands (UK), 7 confirmed cases;
- Saint Martin (FR), 2,560 suspected and 781 confirmed or probable cases, 3 deaths;
- Sint Maarten (NL), 115 confirmed autochthonous cases;
- Martinique, 5,680 suspected and 1,058 confirmed or probable cases, one death;
- Saint Barthélemy, 410 suspected and 134 confirmed or probable cases;
- Guadeloupe, 1,800 suspected and 529 confirmed or probable cases;
- Dominica, 56 confirmed cases (imported) and 91 autochthonous cases;
- French Guiana, 31 confirmed cases, 10 of which are imported cases;
- Anguilla, 14 confirmed cases on the island with one case probably originating from Saint Martin;
- Aruba, one imported case originating from Sint Maarten;
- St. Kitts and Nevis one confirmed case.

ECDC assessment
Epidemiological data indicate that the outbreak, which started in Saint Martin (FR), is expanding. An increasing number of cases have been observed from most of the affected areas. The vector is endemic in the regions, where it also transmits dengue virus. Vigilance is recommended for the occurrence of imported cases of chikungunya in tourists returning to the EU from the Caribbean, including awareness among clinicians, travel clinics and blood safety authorities. The autochthonous cases in French Guadeloupe and Martinique are also of concern.
Guyana are the first autochthonous chikungunya cases in mainland South America.

**Actions**

ECDC published a [rapid risk assessment](#) on 12 December 2013 and an [epidemiological update](#) on 10 January and on 7 February 2014.

**The Caribbean islands**

Middle East respiratory syndrome-coronavirus (MERS CoV) - Multistate

**Opening date:** 24 September 2012  
**Latest update:** 7 March 2014

**Epidemiological summary**

As of 13 March 2014, 191 laboratory-confirmed cases of MERS-CoV have been reported by local health authorities worldwide, including 82 deaths. The following countries have reported MERS-CoV cases:

- **Saudi Arabia:** 151 cases / 62 deaths  
- **United Arab Emirates:** 14 cases / 5 deaths  
- **Qatar:** 7 cases / 4 deaths  
- **Jordan:** 3 cases / 3 deaths  
- **Oman:** 2 case / 2 deaths  
- **Kuwait:** 2 cases / 0 death  
- **UK:** 4 cases / 3 deaths  
- **Germany:** 2 cases / 1 death  
- **France:** 2 cases / 1 death  
- **Italy:** 1 case / 0 death  
- **Tunisia:** 3 cases / 1 death

Twelve cases have been reported from outside the Middle East: the UK (4), France (2), Tunisia (3), Germany (2) and Italy (1). In France, Tunisia and the UK, there has been local transmission among patients who had not been to the Middle East, but had been in close contact with laboratory-confirmed or probable cases. Person-to-person transmission has occurred both among close contacts and in healthcare facilities. However, with the exception of a possible nosocomial outbreak in Al-Ahsa, Saudi Arabia,
secondary transmission has been limited. Twenty-three asymptomatic cases have been reported by Saudi Arabia and three by the United Arab Emirates.

The fourth meeting of the IHR Emergency Committee concerning MERS-CoV was held on 4 December 2013. The Committee concluded that there was no reason to change its previous advice to the Director-General. Their unanimous decision was that the conditions for a Public Health Emergency of International Concern (PHEIC) had not been met.

Based on events since its last meeting, the Committee emphasised the need for:

- investigative studies, including international case-control, serological, environmental, and animal-human interface studies, to better understand risk factors and the epidemiology;
- further review and strengthening of tools, such as standardised case definitions and surveillance, and further emphasis on infection control and prevention.

**Web sources:** ECDC's latest rapid risk assessment | ECDC novel coronavirus webpage | WHO | WHO MERS updates | WHO travel health update | WHO Euro MERS updates | CDC MERS | Saudi Arabia MoH | Eurosurveillance article 26 September | Oman MoH

**ECDC assessment**

The source of MERS-CoV infection and the mode of transmission have not been identified, but the continued detection of cases in the Middle East indicates that there is an ongoing source of infection in the region. There is therefore a continued risk of cases presenting in Europe following exposure in the Middle East, and surveillance for MERS-CoV cases is essential.

The risk of secondary transmission in the EU remains low and could be reduced further through screening for exposure among patients presenting with respiratory symptoms and their contacts, and strict implementation of infection prevention and control measures for patients under investigation.

**Actions**

ECDC’s latest epidemiological update was published on 25 November 2013.

The latest update of a rapid risk assessment was published on 7 November 2013.

The first 133 cases are described in Eurosurveillance published on 26 September 2013.

ECDC is closely monitoring the situation, in collaboration with WHO and EU Member States.
Distribution of confirmed cases of MERS-CoV by month of onset and place of probable infection, March 2012 - 13 March 2014 (n=191*)

Source: ECDC SRS

Distribution of confirmed cases of MERS-CoV by gender and age group, March 2012 - 13 March 2014 (n=180*)

Source: ECDC SRS

* All cases for which age or sex data is missing have been excluded
Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005
Latest update: 13 March 2014

Epidemiological summary

Five new cases of WPV1 with onset of disease in 2014 were reported during last week from Cameroon (2) and Pakistan (3).

WPV1 positive samples have been detected by environmental surveillance in Israel since 3 February 2013 and continue to be detected in 2014 (17 positive samples have been collected this year, the most recent of which was collected on 16 February 2014; in 2013, 169 positive samples were collected).

Worldwide, 33 cases have been reported to WHO in 2014.

Web sources: Polio Eradication: weekly update | MedISys Poliomyelitis | ECDC Poliomyelitis factsheet

ECDC assessment
Europe is polio free. The last polio cases within the current EU borders were reported from Bulgaria in 2001. This was an imported outbreak and it was demonstrated that the WPV originated from India. An outbreak in the Netherlands, in a religious community opposed to vaccinations, caused two deaths and 71 cases of paralysis in 1992.

The last indigenous WPV case in the WHO European Region was in Turkey in 1998. The latest outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

The recent detection of WPV in environmental samples in Israel, and the confirmed and ongoing outbreaks in Syria and Somalia, highlight the risk of re-importation into Europe. Recommendations are provided in the recent ECDC risk assessments:

- Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA
- Wild-type poliovirus 1 transmission in Israel – what is the risk to the EU/EEA?

**Actions**

ECDC follows reports of polio cases worldwide through epidemic intelligence, in order to highlight polio eradication efforts and identify events that increase the risk of re-introduction of wild poliovirus into the EU.

Due to the current situation of polio, the threat is being followed weekly.
The Communicable Disease Threat Report may include unconfirmed information which may later prove to be unsubstantiated.