

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

---

#### Hepatitis A outbreaks in the EU/EEA mostly affecting MSM – 2016/2017

Opening date: 12 December 2016

Latest update: 4 August 2017

EU/EEA Member States are reporting a large increase of hepatitis A virus infections in 2017 affecting predominantly men who have sex with men (MSM).

→Update of the week

Since the beginning of the year and as of 1 August 2017, Austria, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal, Slovenia and Spain have been reporting an increase of hepatitis A cases in comparison with the number of cases detected in 2016.

#### West Nile virus – Multistate (Europe) – Monitoring season 2017

Opening date: 30 May 2017

Latest update: 4 August 2017

During the West Nile virus transmission season, from June to November, ECDC monitors the occurrence of cases of West Nile fever in the EU Member States and the neighbouring countries in order to inform the blood safety authorities about areas with ongoing virus transmission. In 2016, 214 human cases of West Nile fever were reported in the EU Member States and 267 cases in the neighbouring countries.

→Update of the week

Between 28 July and 2 August, one confirmed human case of West Nile fever was reported in Oristano, Sardinia, Italy. No new cases were reported in the neighbouring countries.

Eight West Nile fever *Equidae* cases were notified through the Animal Disease Notification System (ADNS) of the European Commission, all in Argolida, southern Greece. Human cases were reported in the same area earlier this transmission season.

Source: [ADNS](#) | [TESSy](#)

## Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 4 August 2017

Romania and Italy have been experiencing large outbreaks of measles in 2017. Cases continue to be reported despite ongoing response measures (reinforced vaccination activities) at the national level. All EU/EEA countries have reported measles cases this year, except for Latvia, Liechtenstein, Malta and Norway.

→Update of the week

Updates were received from the following EU/EEA countries (see also below): Belgium, the Czech Republic, Finland, Germany, Italy, Romania and the United Kingdom. Several other countries have also reported outbreaks. According to national public health authorities, measles have caused 40 deaths in several EU countries in 2016 and 2017 due to current outbreaks. In 2016, deaths occurred in Romania (12) and the UK (1). In 2017, deaths were reported from Romania (20), Italy (3), Bulgaria (1), Germany (1), Portugal (1) and France (1).

## Monitoring environmental suitability of *Vibrio* growth in the Baltic Sea – Summer 2017

Opening date: 6 July 2015

Latest update: 4 August 2017

Elevated sea surface temperature in marine environments with low salt content are optimal environmental growth conditions for certain *Vibrio* species. These conditions can be found during the summer months in estuaries and enclosed water bodies with moderate salinity.

ECDC has developed a model to map the environmental suitability for *Vibrio* growth in the Baltic Sea ([ECDC E3 Geoportal](#)). Please note that this model has been calibrated to the Baltic Region in northern Europe and that it might not apply to other settings without further validation.

→Update of the week

As of 4 August 2017, the environmental suitability for *Vibrio* growth in the Baltic Sea for the next five days is considered to be very low to low, except in two areas reaching medium suitability, which are located in the delta of Oder river, bordered by West Pomerania Province (Poland) and Mecklenburg-West Pomerania state (Germany), and in the Gdansk bay in the Warmia-Masuria Province (Poland) and Kaliningrad (Russia).

## Non EU Threats

### Seasonal influenza – Asia - 2017

Opening date: 11 July 2017

Latest update: 4 August 2017

In Asia, an increase in seasonal influenza cases, which started in April 2017, has been monitored over the last months.

[Hong Kong](#) | [Taiwan](#) | [Macau](#) | [China](#) | [WHO](#)

→Update of the week

According to [Hong Kong](#) authorities, local influenza activity decreased in the past week but remains at a high level. It is predicted that influenza activity will remain at a high level in the coming weeks. Since the last weekly report, an additional 71 severe influenza cases and 52 deaths were reported in Hong Kong. The number of affected children has increased by one case, with no additional deaths reported. The main circulating influenza virus type is A(H3N2).

[Myanmar](#) has been experiencing a sudden increase of influenza A(H1N1)pdm09 cases. The Myanmar Ministry of Health website, quoting WHO data, states that in the three months of the flu season, seasonal influenza A(H1N1)pdm09 outbreaks were also reported from a number of neighbouring countries, e.g. China (3 068), India (319), Bangladesh (256), Singapore (80) and Thailand (59). This is usually a year-round occurrence in the tropics.

## Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

Latest update: 4 August 2017

ELDSNet, the ECDC surveillance scheme on travel-associated [Legionnaires' disease](#) (TALD) has observed an increase in the number of cases of Legionnaires' disease associated with travel to Dubai, United Arab Emirates (UAE), since October 2016.

→Update of the week

Since the latest CDTR, three additional cases with a travel history to Dubai, UAE, have been reported by the United Kingdom (1 case) and by France (2 cases).

Two cases, who stayed at different accommodation sites, fell ill on 15 July 2017. One case spent the entire incubation period in Dubai, while the other stayed three days in Dubai and visited an accommodation site in Indonesia involved in a cluster. The third case fell ill on 18 July 2017 and stayed in a private accommodation.

On 3 August 2017, ECDC published the sixth epidemiological update on its [website](#).

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

Opening date: 24 September 2012

Latest update: 4 August 2017

Since the disease was first identified in Saudi Arabia in September 2012, approximately 2 000 MERS-CoV cases have been detected in over 20 countries. In Europe, eight countries have reported confirmed cases, all with direct or indirect connection with the Middle East. The majority of MERS-CoV cases continue to be reported from the Middle East. The source of the virus remains unknown, but the pattern of transmission and virological studies point towards dromedary camels in the Middle East as being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

→Update of the week

Since the 30 June 2017 update of MERS-CoV, Saudi Arabia reported nine primary cases of MERS-CoV, four of which had camel contact.

[WHO](#) published a risk assessment on 21 July 2017, which provides additional details on the nosocomial outbreaks in Saudi Arabia.

Sources: [WHO](#) | [MoH Saudi Arabia](#)

## Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 4 August 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, cases continue to be reported from China. No autochthonous cases have been reported outside China. Most cases are isolated, and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak.

→Update of the week

Since the last update 15 July 2017, China has reported one additional case from Jiangsu.

## II. Detailed reports

### Hepatitis A outbreaks in the EU/EEA mostly affecting MSM – 2016/2017

Opening date: 12 December 2016

Latest update: 4 August 2017

#### Epidemiological summary

Austria, in 2017 as of 31 July, reported 103 hepatitis A cases, 75 of whom were male and 28 were female. For the same time period in 2016, 32 cases were reported. For the whole year 2016, 94 cases were reported.

Finland, in 2017 as of 31 July, reported 17 cases of hepatitis A, compared with six cases for the entire 2016.

France, in 2017 as of 31 July, reported 1 149 cases of acute hepatitis A: 65 in January, 89 in February, 156 in March, 191 in April, 300 in May and 348 in June. The number of acute hepatitis A cases reported in the first six months of 2017 is already higher than the 693 cases reported for the whole of 2016. This epidemic is predominantly affecting males, who represent 79% of the cases in 2017.

Germany, in 2017 as of 31 July, reported 589 cases compared with 430 in the same time period in 2016.

Ireland, in 2017 as of 31 July, reported 33 hepatitis A cases compared with 15 cases for the same time period in 2016. For the whole year of 2016, 38 cases were reported.

Italy, since August 2016 and as of April 2017, reported 1 410 cases of hepatitis A compared with 142 cases during the same period in 2015-2016. This epidemic is predominantly affecting males, who represent 85.9% of the cases. Around 61% of the cases are men having sex with men. This represents a high increase compared with 2015, when MSM were involved in 8% of the cases. Among the reported cases, 154 were confirmed to belong to the three clusters reported in Europe.

Latvia, in 2017 as of 14 July, reported ten hepatitis A cases, compared with four during the same time period in 2016.

Lithuania, in 2017 as of 1 August, reported 27 hepatitis A cases, compared with two for the same time period in 2016.

The Netherlands, in 2017 as of 21 May, reported 114 cases of hepatitis A, compared with 20 cases for the same time period in 2016.

Poland, in 2017 as of 15 July, reported 572 cases of hepatitis A, compared with 20 cases for the same time period in 2016. For the whole year of 2016, 35 cases were reported.

Portugal, 2017 as of 23 July, reported 425 cases of hepatitis A. The outbreak is mainly affecting men (88%), and over half of the cases (52%) acquired the illness through sexual contact. Most of the reported cases occurred in the region of Lisbon and Tagus Valley (318 cases). The same virus strain was identified in 204 cases. For the entire year of 2016, 53 cases of hepatitis A were reported in the country.

Slovenia, in 2017 as of 21 June, reported 16 cases of hepatitis A, compared with six cases for the same time period in 2016.

Spain, in 2017 as of 2 July, reported 2 639 cases of hepatitis A, compared with 325 cases reported in the entire 2016. The majority of the cases is believed to be among MSM. In addition, according to a [media](#) article, in 2017, 179 cases and one death due to hepatitis A were reported on the [Canary Islands](#), compared with four in the same period of 2016.

#### ECDC assessment

The peak of the outbreak is unlikely to have passed yet. Confirmed cases might be significantly underestimated due to the challenges in timely reporting.

There might be a multinational dimension of these outbreaks due to the highly interconnected sexual networks among MSM in Europe. In at least two EU Member States, the United Kingdom and Germany, secondary cases have been linked to travel-associated index cases.

Transmission in the community can be related to secondary transmission to contacts of infected cases in the high-risk groups, contamination of food items by infected food handlers, and possibly via substances of human origin, e.g. blood transfusion or tissue and organ donation. Most of the reported cases are suggested to be among HAV-unvaccinated adult MSM, but evidence exists for secondary cases among the general population. As cases have also been reported in food handlers, subsequent foodborne transmission would not be unexpected. Several reports of household transmission linked to these clusters highlight the

need for early contact tracing and post-exposure prophylaxis of close contacts in order to avoid infections among unvaccinated household contacts. A change in the profile of cases, such as an increase in the proportion of cases in females or in age groups under 18 years of age or over 45 years of age, could indicate a possible increased transmission in the general population.

## Actions

ECDC monitors the hepatitis A outbreaks in Europe through EPIS-FWD and epidemic intelligence. ECDC is producing an epidemiological update.

ECDC published a [rapid risk assessment](#) titled "Hepatitis A outbreak in the EU/EEA mostly affecting men who have sex with men, 3rd update" on 28 June 2017.

## West Nile virus – Multistate (Europe) – Monitoring season 2017

Opening date: 30 May 2017

Latest update: 4 August 2017

### Epidemiological summary

Since the beginning of the 2017 transmission season and as of 2 August 2017, five human cases of West Nile fever (one confirmed and four probable) have been reported by Greece, and one confirmed case has been reported by Italy. In the neighbouring countries, one confirmed case and three probable cases were reported by Israel.

In *Equidae*, nine West Nile fever cases were notified through ADNS; eight in Argolida, southern Greece, and one in Rovigo, in north-eastern Italy.

Source: [ECDC WNF page](#) | [ADNS](#) | [TESSy](#)

### ECDC assessment

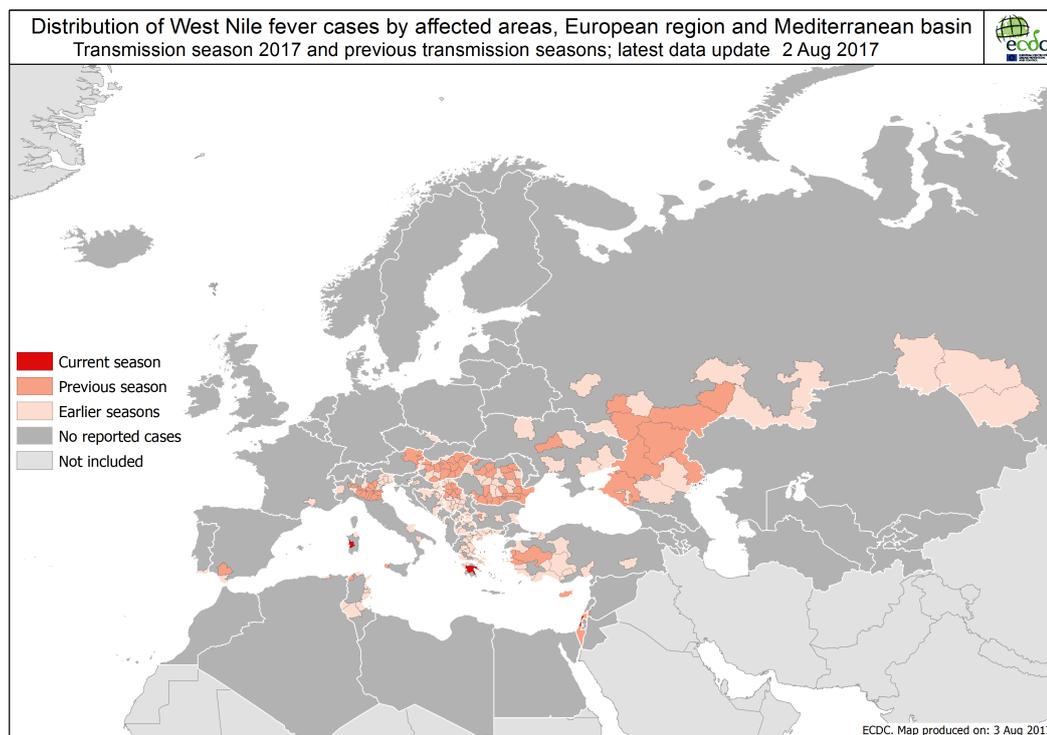
The current West Nile fever epidemiological situation is consistent with observations of seasonal virus transmission from previous years. According to the [Commission Directive 2014/110/EU](#), prospective donors should be deferred for 28 days after leaving a risk area of locally acquired West Nile virus unless an individual nucleic acid test (NAT) is negative.

## Actions

Since 2011, ECDC has been producing weekly maps displaying the areas (NUTS 3 level) where human West Nile fever cases are detected during the transmission season. The aim of these maps is to inform blood safety authorities of West Nile fever-affected areas to support the implementation of the blood safety directive.

## Distribution of West Nile fever cases by affected areas as of 2 August.

ECDC



## Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 4 August 2017

### Epidemiological summary

Epidemiological summary EU/EEA countries, with updates since last week:

**Belgium:** From late June until 26 July 2017: outbreak in a Ghent prison with 19 cases (14 prisoners and five staff members).

**Czech Republic:** Three additional cases since the report on 23 June 2017. Since the beginning of 2017 and as of 30 July, the Czech Republic reported 133 measles cases. During the same time period in 2016, the Czech Republic reported four cases.

**Finland:** On 3 August 2017, [Finland](#) reported a cluster of four measles cases among Finnish travellers returning from Italy. All cases had been vaccinated twice against measles and had mild rash and fever symptoms. Since the beginning of the year and as of 3 August 2017, and adding the cluster above, eight cases of measles have been reported in [Finland](#), compared with one for the same time period in 2016.

**Germany:** An increase of 13 cases since the last report on 28 July 2017 was reported. Since the beginning of 2017 and as of 2 August, Germany reported 814 measles cases. During the same time period in 2016, Germany reported 196 cases.

**Italy:** An increase of 159 cases since the last report on 28 July 2017 was reported. Since the beginning of 2017 and as of 1 August, Italy reported 4 001 cases, including three deaths. Among the cases, 275 are healthcare workers. The median age is 27 years, 89% of the cases were not vaccinated, and 6% received only one dose of vaccine. During the same time period in 2016, Italy reported 522 cases.

**Romania:** An increase of 101 cases since the last report on 28 July 2017 was reported. Since 1 January 2016 and as of 28 July 2017, Romania reported 8 347 cases, including 32 deaths. Of these, 1 969 cases were reported during 2016, and 6 378 cases were reported between January 2017 and 28 July.

**United Kingdom:** [Public Health Wales](#) reported two additional cases related to the outbreak in Newport and Torfaen, bringing the number of cases related to this outbreak to 12.

Since the last report on 28 July 2017, England and Wales report an increase by 40 cases. Since the beginning of 2017 and as of 30 July 2017, [England and Wales](#) report 962 cases. In the same time period in 2016, they reported 996 cases.

6/15

## ECDC assessment

Measles outbreaks continue to occur in EU/EEA countries. There is a risk of spread and sustained transmission in areas with susceptible populations. Vaccination with two doses remains the most effective measure.

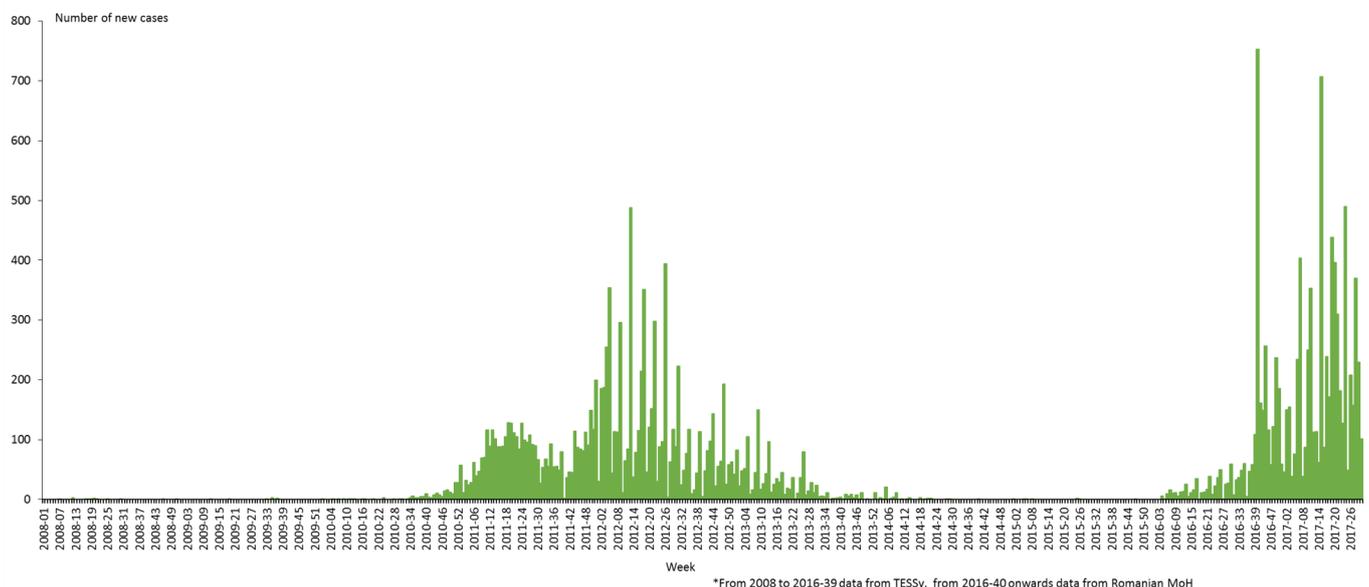
**ECDC link:** [Measles page](#)

## Actions

All EU/EEA countries report measles cases on a monthly basis to ECDC, and these data are published every month. Since 10 March 2017, ECDC has been reporting on measles outbreaks in Europe on a weekly basis. ECDC also monitors worldwide outbreaks on a monthly basis through epidemic intelligence activities. ECDC published a [rapid risk assessment](#) on 6 March 2017.

## New measles cases per week of reporting, week 2008-1 to 2017-30, Romania

Data source: National Institute of Public Health Romania and TESSy (ECDC)



## Monitoring environmental suitability of *Vibrio* growth in the Baltic Sea – Summer 2017

Opening date: 6 July 2015

Latest update: 4 August 2017

### Epidemiological summary

As of 4 August 2017, the environmental suitability for *Vibrio* growth in the Baltic Sea for the next five days is considered to be very low to low, including the southern part of the Baltic.

In 2016, three EU countries reported one case of *Vibrio* infection: Norway reported one case of *Vibrio parahaemolyticus* infection associated with bathing in the Oslo Fjord, Germany reported a case of *Vibrio vulnificus* acquired on Swinoujscie beach (Baltic Sea, Poland), and the Netherlands reported a case that was infected in Zeeland (North Sea).

Sea surface temperatures (SST) in the Baltic Sea: [http://www.ospo.noaa.gov/Products/ocean/sst/anomaly/anim\\_full.html](http://www.ospo.noaa.gov/Products/ocean/sst/anomaly/anim_full.html)

*Vibrio* suitability tool available on the E3 Geoportal:

<https://e3geoportal.ecdc.europa.eu/SitePages/Vibrio%20Map%20Viewer.aspx>

Please note that this model has been calibrated to the Baltic Region in northern Europe and might not apply to other settings prior to validation. For the Baltic Sea, the following model parameters should be used in the map: number colour bands: 20, scale method: linear, legend range: min. value (0) and max. value (28).

## ECDC assessment

Elevated sea surface temperature in marine environments with low salt content are ideal environmental growth conditions for certain *Vibrio* species. These conditions can be found during the summer months in estuaries and enclosed water bodies with moderate salinity. In contrast, open ocean environments do not offer appropriate growth conditions for these bacteria due to the high salt content, low temperature and limited nutrient content.

These vibrio species can cause vibriosis infections, particularly *V. parahaemolyticus*, *V. vulnificus* and non-toxigenic *V. cholera*. Vibriosis in humans caused by these species in the Baltic region have occurred in the past during hot summer months particularly when sea surface temperature has been elevated (above 20 Celcius degree). The most common clinical manifestations are gastroenteritis with nausea, vomiting, and diarrhoea, wound infections when exposure of a cut, wound or abrasion to contaminated seawater, primary septicemia, and otitis externa. Risk factors for illness, apart from contact with natural bodies of waters, especially marine or estuarine waters, also include consumption of shellfish, particularly raw oysters.

## Actions

ECDC is monitoring this threat on a weekly basis during the summer of 2017 and reports on increased environmental suitability for the growth of *Vibrio* bacteria.

## Seasonal influenza – Asia - 2017

Opening date: 11 July 2017

Latest update: 4 August 2017

### Epidemiological summary

In Hong Kong, the latest surveillance data show that the local influenza activity continues at a high level. Since 5 May and as of 3 August 2017, Hong Kong reported 450 cases of influenza-associated admissions to intensive care units, including 307 deaths. Most of the cases (385), were due to A(H3N2). Twenty-seven cases of severe influenza-associated complications and four deaths have been reported in children so far in 2017.

In Macau, as of the week ending 22 July 2017, the proportion of influenza-like illness (ILI) cases among adults and children in emergency departments increased from the previous week. The proportion of influenza detections was 53.6%, compared with 44.9% in the previous week. Influenza A(H3) constituted 82.3% of the influenza detections.

In southern China, as of the week ending 23 July 2017, influenza activity was at the summer peak and continued to increase. The proportion of ILI cases in emergency and outpatient departments reported by sentinel hospitals was 4.1%, slightly lower than in the previous week (4.3%), but higher than in the corresponding periods in 2014, 2015 and 2016 (3.6%, 3.6%, 3.1%, respectively). The proportion of influenza detections was 21.0%, compared with 18.3% recorded in the previous week. Influenza A (H3N2) constituted 90.3% of the influenza detections.

In Taiwan, as of the week ending 29 July 2017, the numbers and proportions of ILI cases in emergency and outpatient departments showed a decreasing trend. The predominating viruses were influenza A(H3N2), while influenza B constituted approximately 9% of all influenza detections.

According to the health authorities in [Myanmar](#), the country recorded 305 cases and 14 deaths due to influenza A(H1N1) pdm09 (as of end of July 2017).

[Hong Kong](#) | [Taiwan](#) | [Macau](#) | [China](#) | [Myanmar](#)

## ECDC assessment

During the past months, an increase of seasonal influenza activity in Asia was reported, with a significant impact on Hong Kong, Macau and Taiwan, where the main circulating influenza virus type was A(H3N2). In Hong Kong, most indicators suggest that the number of cases and hospitalisations are above the numbers seen since 2013 during this time of year.

Vaccination remains the best documented and most effective preventive measure against influenza.

Early treatment and post-exposure prophylaxis with antivirals (neuraminidase inhibitors) can assist in protecting the elderly and people in risk groups from severe influenza illness. The circulating viruses analysed so far show susceptibility to the antiviral drugs

oseltamivir and zanamivir. As advised during previous seasons, physicians should always consider early treatment (i.e. within 48 hours of symptom onset for oseltamivir and 36 hours for zanamivir) or post-exposure prophylaxis with neuraminidase inhibitors when treating influenza-infected patients and exposed individuals who belong to risk groups.

Self-isolation, hand-washing and good respiratory hygiene/cough etiquette are effective and simple measures recommended to reduce transmission and to protect individuals against infection. However, strict compliance to these measures is difficult to implement.

## Actions

ECDC has been in contact with WHO and local health authorities to obtain further information. ECDC monitors this event through epidemic intelligence in order to prepare communication activities and advice for the upcoming European influenza season.

## Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

Latest update: 4 August 2017

### Epidemiological summary

As of 1 August 2017, 13 EU/EFTA Member States have reported 72 TALD cases with onset of symptoms since 1 October 2016 and with travel history to Dubai within two to ten days prior to illness. Cases were reported by the UK (34), Sweden (8), the Netherlands (6), Germany (7), Denmark (4), France (6), Austria (1), Belgium (1), the Czech Republic (1), Hungary (1), Ireland (1), Spain (1) and Switzerland (1). Sixty-five cases are associated with commercial accommodation sites and seven with private accommodation sites. Sixteen cases spent time in another location in the UAE or in a country other than their home country during their incubation period. Two cases were reported as fatal.

All cases are laboratory confirmed. Five cases had their infection further characterised as *Legionella pneumophila* serogroup 1, sequence base type 616, and one as *Legionella pneumophila* serogroup 1, sequence base type 2382. Sequence base type 616 is uncommon in Europe and has been associated with other cases of Legionnaires' disease returning from Dubai in previous years. Sequence base type 2382 is a new sequence type closely-related to type 616 (personal communication, ELDSNet network). Two cases have been characterised as *Legionella pneumophila* serogroup 2-14, sequence base type 1327.

### ECDC assessment

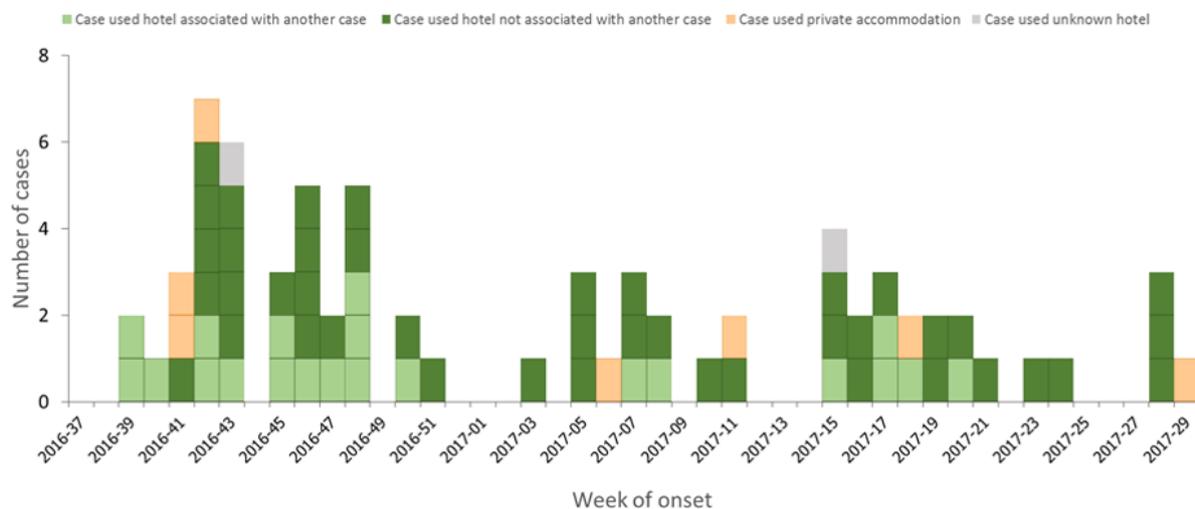
Cases continue to be reported with onset of symptoms in recent weeks, indicating that there is a persistent source of *Legionella* exposure common to travellers with a travel history to Dubai. The majority of reported cases are associated with different accommodation sites dispersed geographically across Dubai, suggesting a common source not associated with accommodation sites. However, it cannot be ruled out that some travellers may have acquired their infection elsewhere if their stay in Dubai was shorter than the range of the incubation period. The increase in cases observed between October 2016 and June 2017 is above the number of cases observed in the same period in previous years.

## Actions

ECDC is monitoring this event through ELDSNet. ECDC is in contact with EU Member States, the ELDSNet network, the World Health Organization and the United Arab Emirates to share information. ECDC published a [rapid risk assessment](#) on its website on 23 December 2016. The conclusions of the rapid risk assessment remain valid. ECDC also posted an [epidemiological update](#) on 3 August 2017.

## Distribution of travel-associated Legionnaires' disease cases with history of stay in Dubai, United Arab Emirates, by week of onset and accommodation site clustering, weeks 37/2016–29/2017, as reported to ELDSNet by 1 August 2017 (n=72 cases)

ELDSNet



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

Opening date: 24 September 2012

Latest update: 4 August 2017

### Epidemiological summary

Since April 2012 and as of 3 August 2017, 2 049 cases of MERS-CoV, including 774 deaths, have been reported by health authorities worldwide.

**Web sources:** [ECDC's latest rapid risk assessment](#) | [ECDC novel coronavirus webpage](#) | [WHO](#) | [WHO MERS updates](#) | [CDC MERS](#) | [Saudi Arabia MoH](#) | [ECDC factsheet for professionals](#) | [MoH Lebanon](#)

### ECDC assessment

The risk of sustained human-to-human transmission in Europe remains very low. ECDC's conclusion continues to be that the MERS-CoV outbreak poses a low risk to the EU, as stated in a [rapid risk assessment](#) published on 21 October 2015, which

10/15

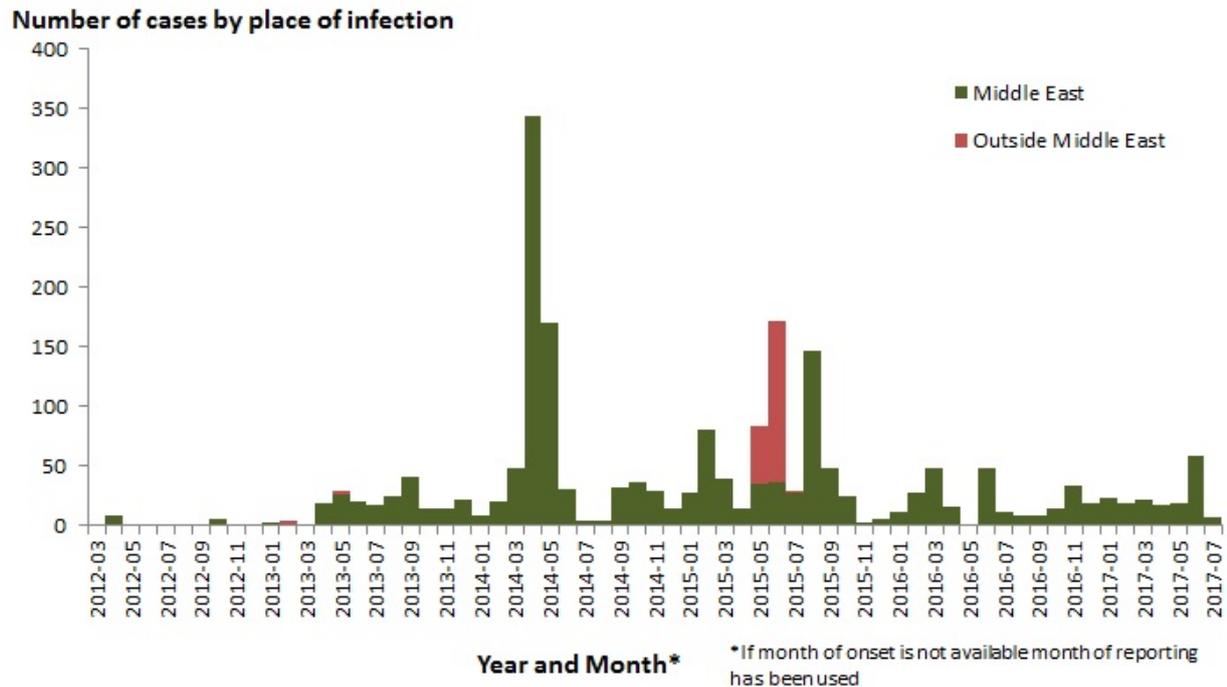
provides details on the last case reported in Europe.

## Actions

ECDC published the 21st update of its MERS-CoV [rapid risk assessment](#) on 21 October 2015.

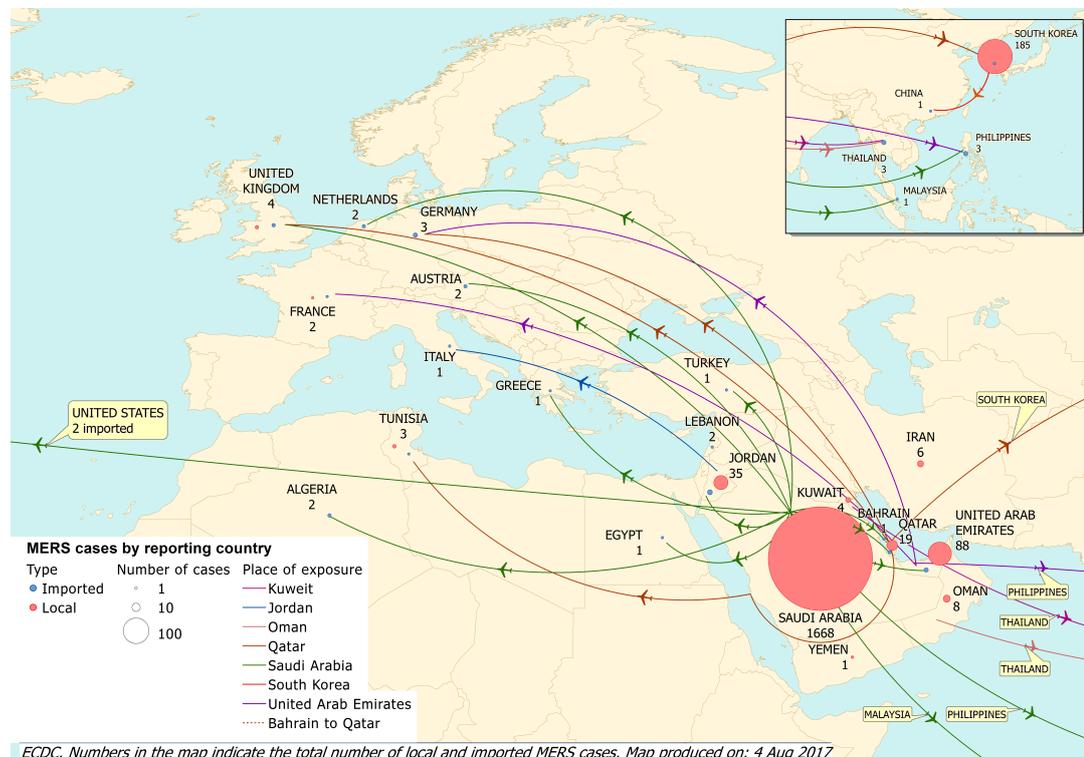
## Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, March 2012 – 31 July 2017

ECDC



## Distribution of confirmed cases of MERS-CoV by probable place of infection and place of reports, March 2012 – 3 August 2017

ECDC



## Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 4 August 2017

### Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 2 August 2017, 1 557 cases have been reported, including 566 deaths. The outbreak shows a seasonal pattern. The first wave in spring 2013 (weeks 7/2013 to 40/2013) resulted in 135 cases, the second wave (weeks 41/2013 to 40/2014) led to 320 cases, the third wave (weeks 41/2014 to 40/2015) caused 223 cases, and for the fourth wave (weeks 41/2015 to 40/2016), 120 cases were reported. A fifth wave started in October 2016 (week 41/2016), with 759 cases as of 2 August 2017.

The 1 557 cases were reported from Zhejiang (310), Guangdong (258), Jiangsu (251), Fujian (107), Anhui (99), Hunan (93), Shanghai (57), Jiangxi (52), Sichuan (38), Beijing (35), Guangxi (31), Hubei (31), Hebei (29), Henan (28), Shandong (28), Hong Kong (21), Guizhou (20), Xinjiang (11), Chongqing (9), Gansu (5), Shaanxi (7), Taiwan (5), Tianjin (5), Liaoning (4), Jilin (3), Tibet (3), Inner Mongolia (2), Macau (2), Shanxi (3), Yunnan (7). Three imported cases were reported in Canada (2) and Malaysia (1).

**Sources:** [Chinese CDC](#) | [Hong Kong CHP](#) | [WHO](#) | [WHO FAQ page](#) | [ECDC](#)

### ECDC assessment

This is the fifth winter season in the northern hemisphere with human cases caused by influenza A(H7N9) infections. During this wave, the number of human cases has been higher than in previous waves. This is most likely due to greater environmental contamination in live bird markets and increased circulation of the virus among poultry. In contrast to the situations observed during the summer months in previous years, influenza A(H7N9) viruses are continuously circulating in the poultry population, with transmission to humans causing a substantial number of cases.

During the current wave, a new influenza A(H7N9) virus with mutations in the haemagglutinin gene indicating high pathogenicity in poultry was detected. This new variant was detected in 25 human cases in three provinces of China and in environmental and poultry samples. It is unclear at the moment whether the newly emerged, highly-pathogenic avian influenza virus A(H7N9) will replace the low-pathogenic virus or if both will co-circulate in the bird population. Although the genetic changes in influenza A (H7N9) may have implications for poultry in terms of pathogenicity, there is no evidence to date of increased transmissibility to

12/15

humans or sustainable human-to-human transmission.

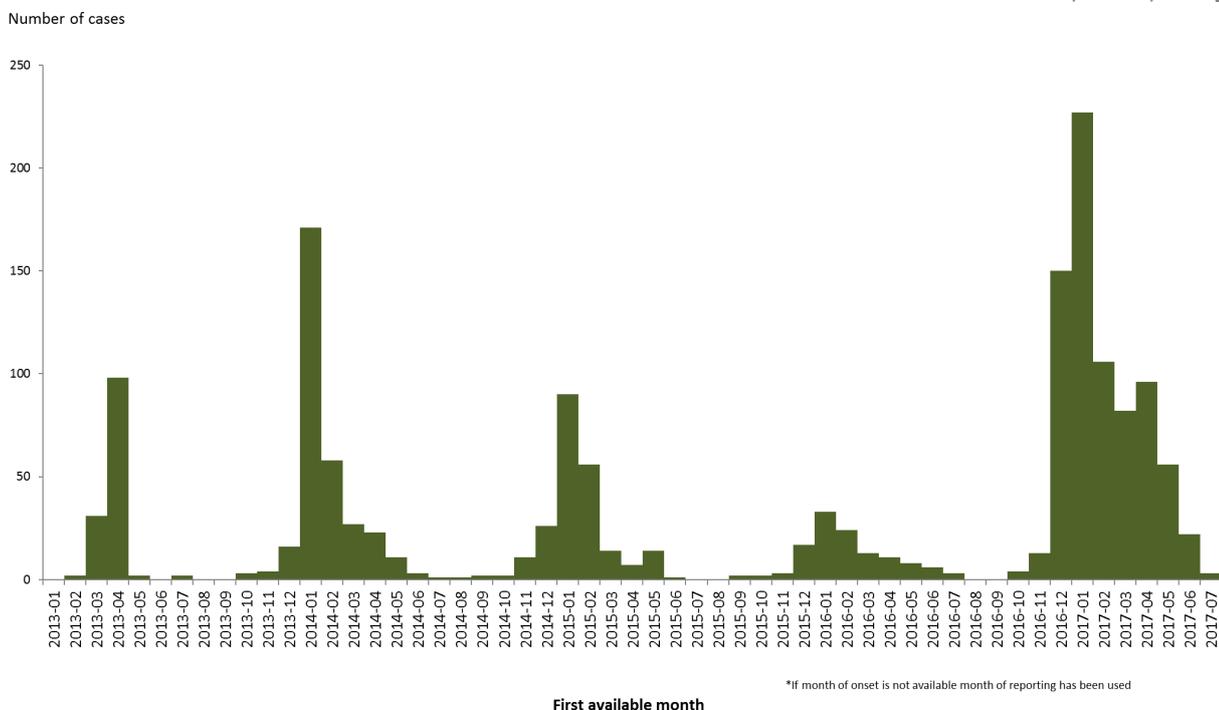
The possibility of humans infected with influenza A(H7N9) returning to the EU/EEA cannot be excluded. However, the risk of the disease spreading in Europe through humans is still considered low, as there is no evidence of sustained human-to-human transmission.

## Actions

ECDC published the seventh update of its [rapid risk assessment](#) on 3 July 2017, addressing the genetic evolution of influenza A (H7N9) virus in China and the implications for public health. ECDC monitors this event through epidemic intelligence and will report monthly.

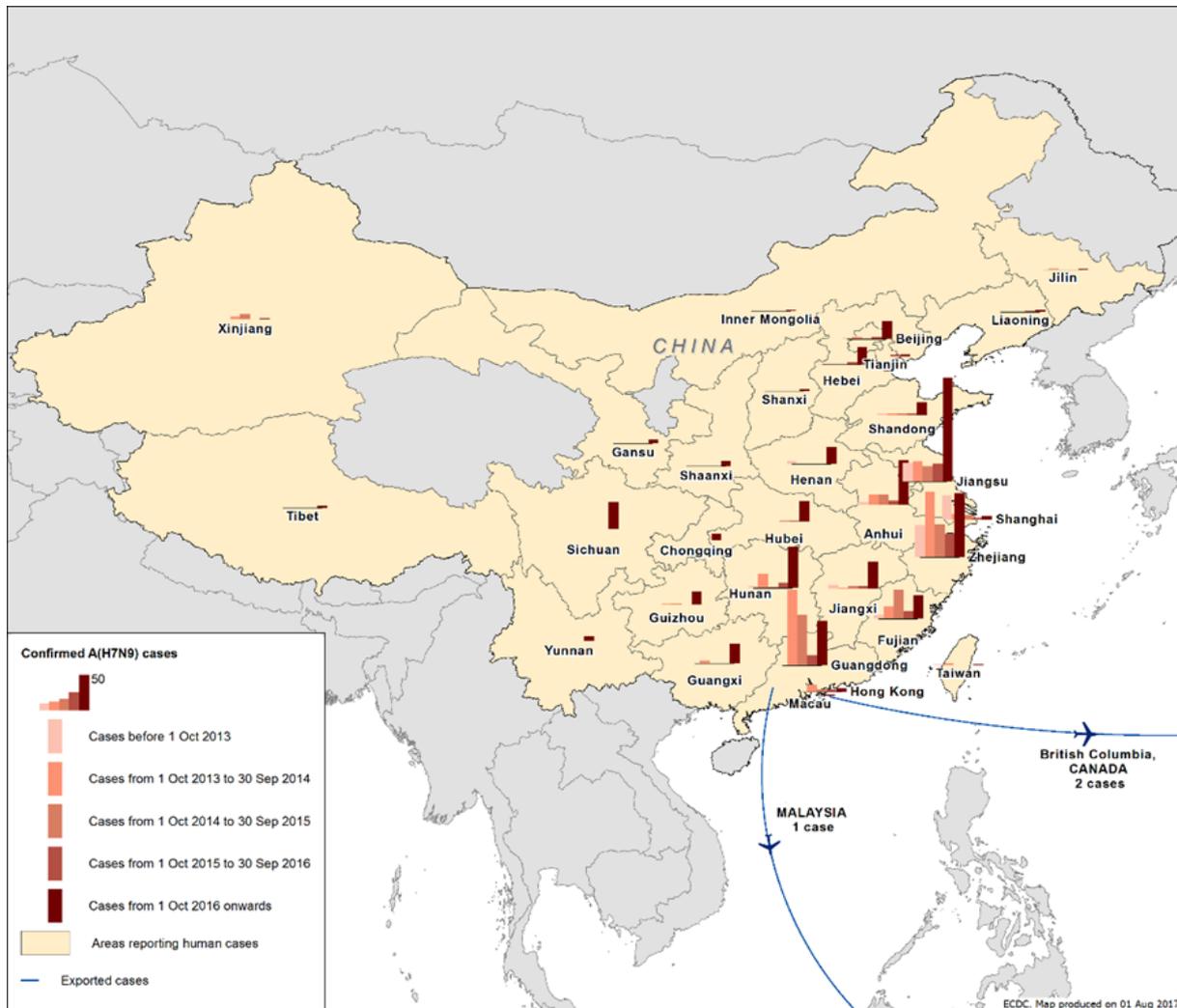
## Distribution of confirmed cases of A(H7N9) by first available month, February 2013 to 2 August 2017

ECDC, WHO, Hong Kong MoH



Distribution of confirmed cases of A(H7N9) by five seasons, February 2013 to 2 August 2017

ECDC



The Communicable Disease Threat Report may include unconfirmed information which may later prove to be unsubstantiated.