

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

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

Opening date: 4 October 2013

Latest update: 20 December 2013

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity seen 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

During week 50/2013, 28 countries experienced low intensity influenza activity.

### Non EU Threats

#### Autochthonous cases of chikungunya - Saint Martin- 2013

Opening date: 9 December 2013

Latest update: 19 December 2013

On 6 December 2013, France reported two laboratory confirmed autochthonous cases of chikungunya in the French part of the Caribbean island of Saint Martin. These two cases were confirmed during an active case search that was implemented following the notification on 18 November 2013 of a cluster of five cases of arthralgia and fever, for which a diagnosis of dengue was excluded. This is the first documented autochthonous transmission of chikungunya virus in the Americas, on the Caribbean island of Saint Martin.

→ Update of the week

As of 19 December 2013, the local health authorities of the French Caribbean Islands reported 26 confirmed and 12 probable autochthonous cases of chikungunya on the island of Saint Martin.

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

Opening date: 31 March 2013

Latest update: 19 December 2013

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, the outbreak has affected 14 Chinese provinces, causing 147 cases of human infection, including 47 deaths. Since October 2013, twelve cases have occurred in: Hong Kong (two cases) and in two previously affected provinces; Zhejiang (five cases) and Guangdong (five cases). Zoonotic transmission from poultry to humans is thought to be the most likely scenario. There has been no evidence of an epidemiological link between most of the cases or sustained person-to-person transmission.

→ Update of the week

During the past week, four new cases have been reported in Guangdong province in China.

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

Opening date: 15 June 2005

Latest update: 19 December 2013

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

In 2013, as of 19 December, 38 new cases of laboratory-confirmed human cases with influenza A(H5N1) virus infection were reported worldwide, of which 26 were in Cambodia.

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

Opening date: 24 September 2012

Latest update: 19 December 2013

Since April 2012, 165 laboratory-confirmed cases, including 71 deaths, of acute respiratory disease caused by Middle East respiratory syndrome coronavirus (MERS-CoV), have been reported by national health authorities. MERS-CoV is genetically distinct from the coronavirus that caused the SARS outbreak. 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.

→Update of the week

During the past week, no new cases were reported.

## Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 12 December 2013

Dengue fever is one of the most prevalent vector-borne diseases in the world, affecting an estimated 50-100 million people each year, mainly in the tropical regions of the world. The identification of sporadic autochthonous cases in non-endemic areas in recent years has already highlighted the risk of locally acquired cases occurring in EU countries where the competent vectors are present. The dengue outbreak in the Autonomous Region of Madeira, Portugal, in October 2012 further underlines the importance of surveillance and vector control in other European countries.

→Update of the week

So far in 2013, no autochthonous dengue cases have been reported in European countries apart from sporadic cases in Madeira in January.

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

Opening date: 8 September 2005

Latest update: 19 December 2013

Polio, a crippling and potentially fatal vaccine-preventable disease affecting mainly children under the age of five, is close to being eradicated from the world after a significant global public health investment and effort. However, outbreaks, such as the one currently affecting the Horn of Africa and a recently reported cluster of poliomyelitis cases in Syria pose serious challenges to attaining this goal.

→Update of the week

During the past week one new wild polio virus type 1 (WPV1) case was reported to the World Health Organization (WHO) from Pakistan.

## II. Detailed reports

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

Opening date: 4 October 2013

Latest update: 20 December 2013

#### Epidemiological summary

During 50/2013, of the 29 reporting countries, 28 recorded low intensity influenza activity. Of 561 sentinel specimens tested across 24 countries, 45 (8%) were positive for influenza viruses. Seven hospitalised laboratory-confirmed influenza cases were reported by four countries.

Web sources: [WISO](#) | [ECDC Seasonal influenza](#) | [CDC Seasonal influenza](#)

#### ECDC assessment

Since the start of the 2013-2014 influenza surveillance in week 40/2013, there has been no evidence of sustained influenza activity in Europe. However, indicators suggest that the season may be starting in some countries.

#### Actions

ECDC will be producing the weekly influenza surveillance overview on a weekly basis.

### Autochthonous cases of chikungunya - Saint Martin- 2013

Opening date: 9 December 2013

Latest update: 19 December 2013

#### Epidemiological summary

On 6 December, France confirmed two cases of autochthonous chikungunya in the French part of the Caribbean island of Saint Martin. These two cases were detected through active case finding, implemented following the notification on 18 November 2013 of a cluster of five cases of arthralgia and fever, for which a diagnosis of dengue was excluded (negative NS1 and IgM). The onset of symptoms of the five notified cases occurred between 12 October and 15 November 2013. They were all residents of the Oyster Pond neighbourhood, located on the border with the Dutch part of the island.

As of 19 December 2013, the local health authorities of the French Caribbean Islands reported 26 confirmed and 12 probable autochthonous cases of chikungunya on the island of Saint Martin. Three foci are identified on the Island namely Oyster Pond, Sandy Ground and quartier d'Orleans but new foci seem to be emerging. Additional three cases were detected on the Dutch part of the Island, two cases of chikungunya have been confirmed on the island of Martinique, according to media quoting regional health authorities, and in Guyane a case imported from Martinique was detected.

#### ECDC assessment

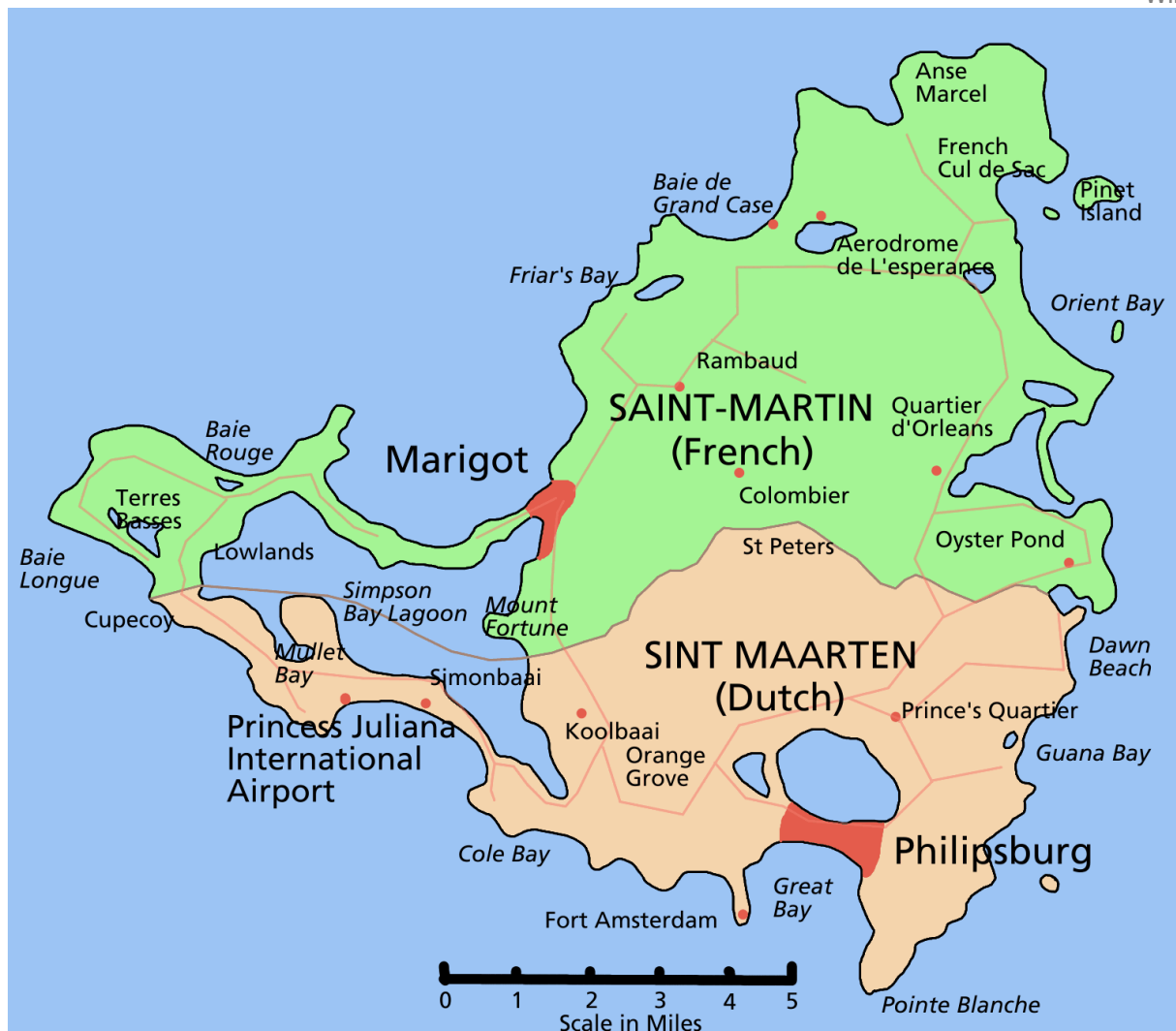
These new developments strengthen the evidence supporting the conclusion and recommendations of the [ECDC risk assessment published on 12 December](#), stating that the risk of spread of the disease to other islands in the Caribbean region is high. Due to the increased travel during the Christmas holidays, vigilance must be maintained regarding imported cases of chikungunya in the EU, including awareness among clinicians and travel clinics and blood safety authorities.

#### Actions

ECDC published a [rapid risk assessment](#) on 12 December 2013.

## Island of Saint Martin

Wikipedia



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

Opening date: 31 March 2013

Latest update: 19 December 2013

### Epidemiological summary

In March 2013, Chinese authorities announced the identification of a novel reassortant A(H7N9) influenza virus in patients in eastern China. Since then, 147 cases of human infection with influenza A(H7N9) have been reported from: Zhejiang (51 cases), Shanghai (34), Jiangsu (27), Henan (4), Anhui (4), Beijing (2), Shandong (2), Fujian (5), Hunan (3), Jiangxi (5), Hebei (1), Guangdong (6), Hong Kong (2) and Taiwan (1). In addition, the virus has been detected in one asymptomatic case in Beijing. Most cases have developed severe respiratory disease. Forty-seven patients have died (case-fatality ratio=32%). The median age is 61 years, ranging from three to 91 years; 42 of 147 patients are female, with gender being unknown in five cases.

Twelve cases have been reported in China since October 2013. Ten of these cases have occurred in previously affected provinces (Zhejiang and Guangdong) and two cases have been reported in Hong Kong.

**Web sources:** [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [OIE](#) | [Chinese MOA](#) | [Hong Kong NHFPC](#) | [Hong Kong government news release](#) | [WHO DON](#) |

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## ECDC assessment

Influenza A(H7N9) is a zoonotic disease that has spread in poultry in parts of eastern China, causing severe disease in humans. There is no evidence of sustained person-to-person transmission. Close to 3 000 contacts have been followed-up, and only a few are reported to have developed symptoms, as part of three small family clusters. Many unanswered questions remain regarding this disease, e.g. the reservoir, the route of transmission, the spectrum of disease and the reason for an unusual age-gender imbalance.

Authorities have employed strict control measures including closing live poultry markets and culling poultry in affected areas. Following these measures, the number of reported cases has dropped. It is not possible to determine at this point whether these new cases, reported since October, mark the resurgence of the outbreak. ECDC's earlier risk assessment remains valid.

EU citizens travelling and living in China are strongly advised to avoid live bird markets. The risk of the disease spreading to Europe via humans is considered low. However, it is not unlikely that people presenting with severe respiratory infection in the EU and a history of potential exposure in the outbreak area will require investigation in Europe.

## Actions

The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation including scientific research.

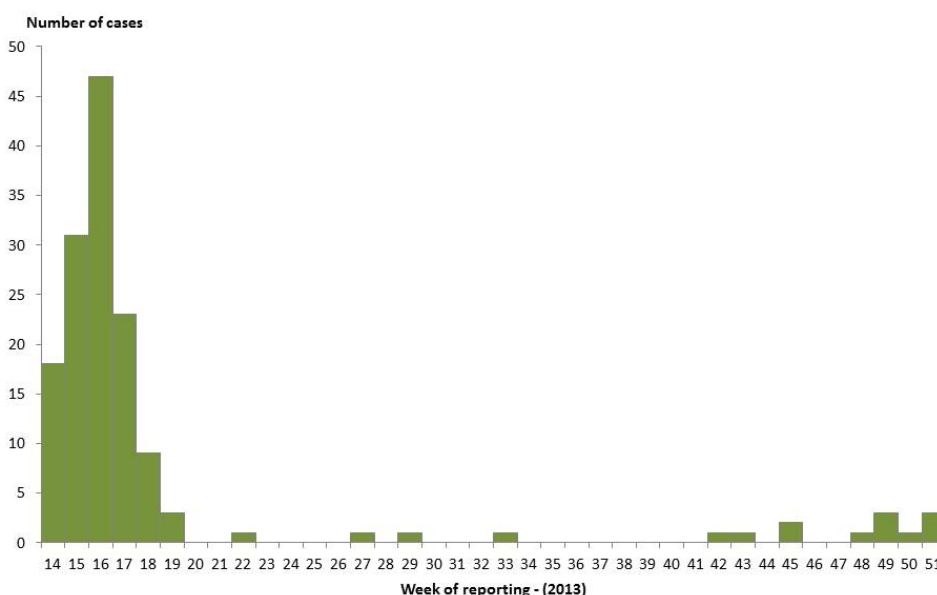
ECDC is closely monitoring developments.

ECDC published an updated [Rapid Risk Assessment](#) on 8 May 2013.

ECDC guidance for [Supporting diagnostic preparedness for detection of avian influenza A\(H7N9\) viruses in Europe](#) for laboratories was published on 24 April 2013.

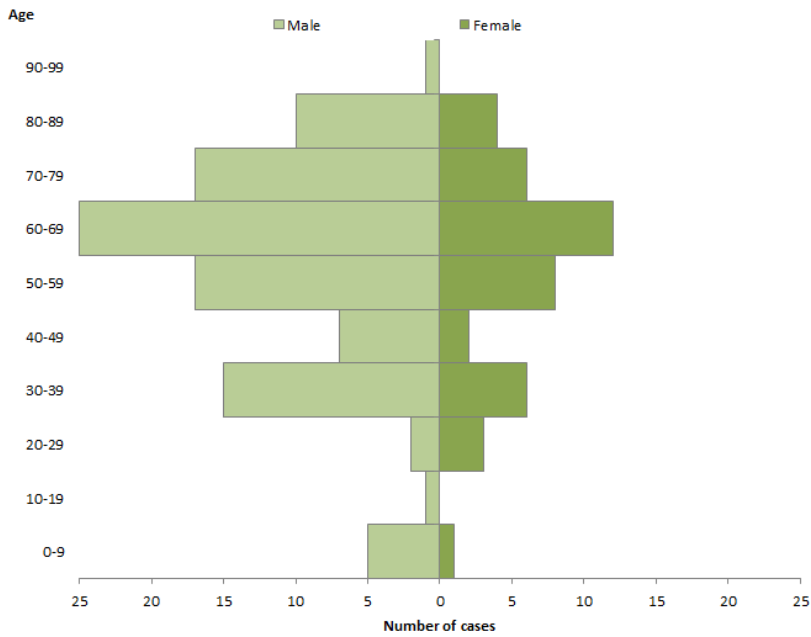
## Distribution of confirmed A(H7N9) cases by date of reporting, week 14-51 2013, China (n=147)

ECDC



Distribution of confirmed A(H7N9) cases by gender and age, week 14-51 2013, China (N=141\*)

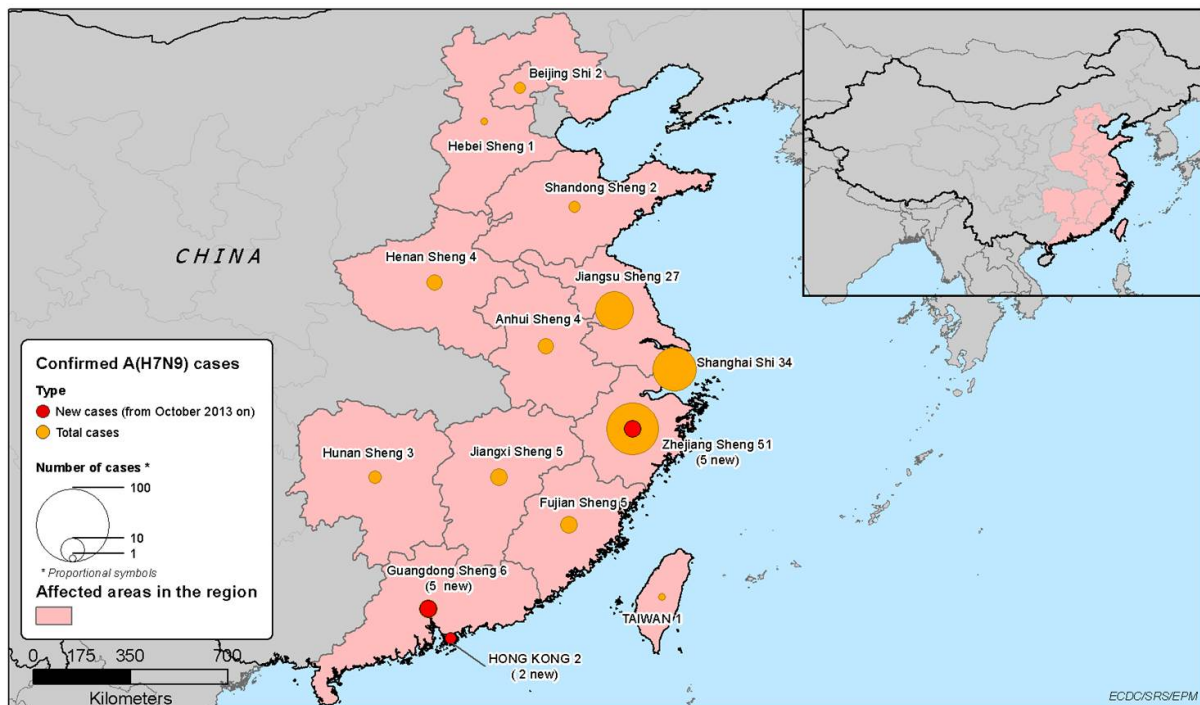
ECDC



\* 5 cases were age or gender is missing have been excluded

## Distribution of cumulative number of confirmed cases of novel influenza A(H7N9) in China, March – 19 December 2013

ECDC



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

Opening date: 15 June 2005

Latest update: 19 December 2013

### Epidemiological summary

Thirty-eight human cases with influenza A(H5N1) virus infection have been laboratory-confirmed since the beginning of the year. The countries affected this year are Cambodia (26), Egypt (4), Indonesia (3), China (2), Vietnam (2), Bangladesh (1). Among these cases, 24 have been fatal, most of them in Cambodia (14).

From 2003 through to 10 December 2013, 648 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries. Of these cases, 384 have died.

In Cambodia, the reported incidence of human cases has increased in 2013 compared to previous years (26 cases in 2013 compared with 21 cases from 2005 through to December 2012). However, the case-fatality rate among reported cases has decreased (54% in 2013 compared with 90% over all previous years).

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Web sources: [ECDC Rapid Risk Assessment](#) | [Avian influenza on ECDC website](#) | [WHO updates](#) | [WPRO updates](#)

## ECDC assessment

During 2013, Cambodia has experienced a significant increase in the number of reported cases compared to previous years. Five of the most recently reported cases by WHO were children and had contact with poultry prior to falling ill. The increase in the number of cases is not linked with a clustering of cases or human-to-human transmission and the [ECDC rapid risk assessment](#) for influenza A(H5N1) remains valid. In addition, the case-fatality ratio has decreased in 2013, suggesting improved sensitivity of surveillance in Cambodia.

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. 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. There are currently no indications that there is any 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

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

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

Opening date: 24 September 2012

Latest update: 19 December 2013

### Epidemiological summary

As of 20 December 2013, 165 laboratory-confirmed cases of MERS-CoV have been reported by local health authorities worldwide, including 71 deaths.

Saudi Arabia has reported 116 symptomatic and 16 symptomatic cases including 55 deaths; Jordan two fatal cases; United Arab Emirates nine cases, including three deaths; Qatar seven cases, including five deaths; Oman one fatal case and Kuwait two cases.

Twelve cases have been reported from outside the Middle East: in the UK (4), France (2), Tunisia (3), Germany (2) and Italy (1). In France, Tunisia and the United Kingdom, there has been local transmission among patients who have not been to the Middle East but have 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. Sixteen asymptomatic cases have been reported by Saudi Arabia and two by the United Arab Emirates (UAE). Seven of these cases were healthcare workers.

The 4th meeting of the IHR Emergency Committee concerning MERS-CoV was held on 4 December 2013. The Committee concluded that it saw 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) have not at present 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 such tools such as standardised case definitions and surveillance, and further emphasis on infection control and prevention.

A study published in *The Lancet Infectious Diseases* indicates that dromedary camels on a farm in Qatar were infected with a strain of MERS-CoV nearly identical to that found in two people associated with the farm which suggests a recent outbreak



affecting both humans and camels. However, this study could not conclude whether people on the farm were infected by the camels or vice versa, or if a third source was responsible.

**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](#) | [Spain MoH](#)

## ECDC assessment

The continued detection of MERS-CoV cases in the Middle East indicates that there is an on-going source of infection present in the region. The source of infection and the mode of transmission have not been identified. There is therefore a continued risk of cases occurring in Europe associated with travel to the area. Surveillance for 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

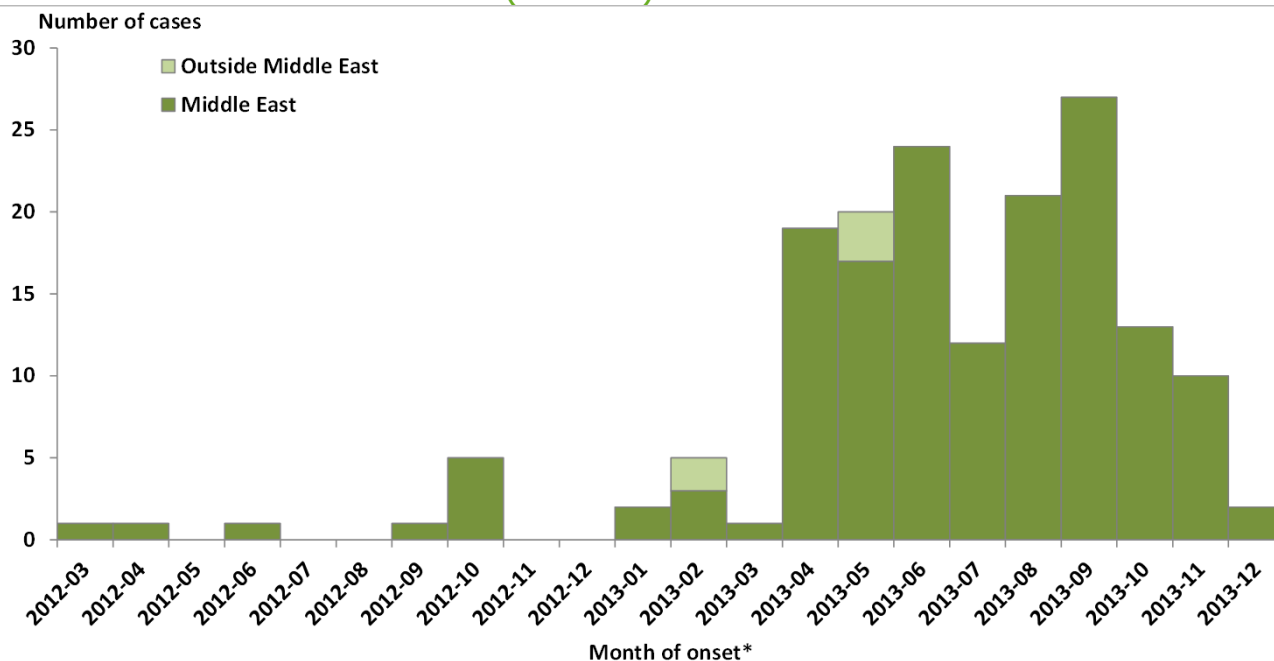
ECDC's latest [epidemiological update](#) was published on 25 November 2013.

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.

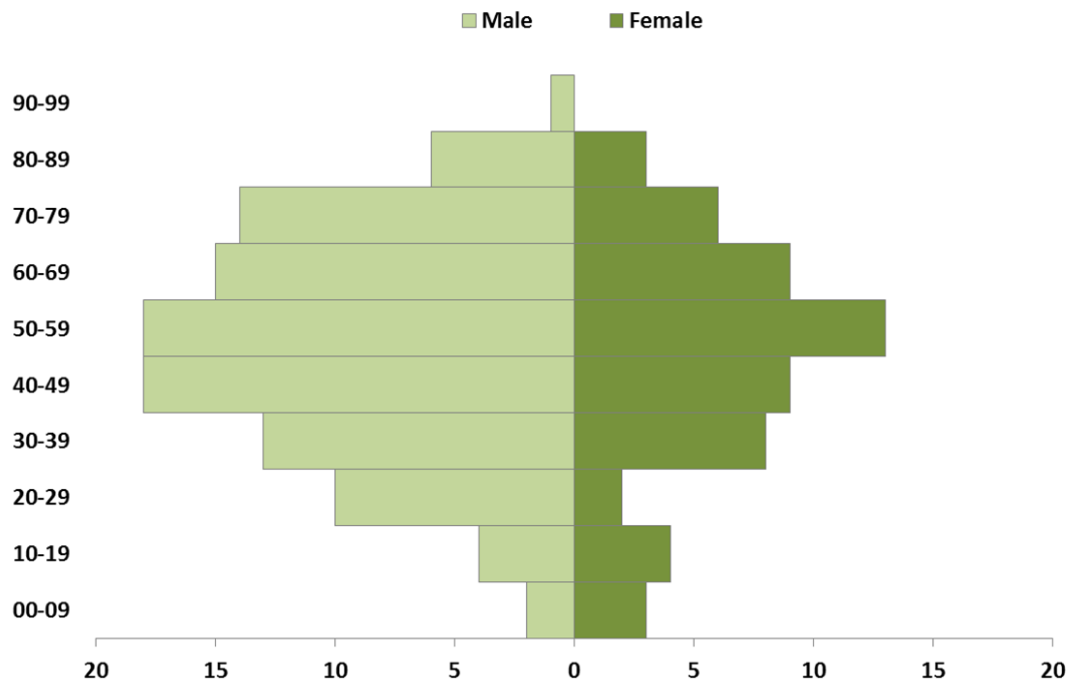
## Distribution of confirmed cases of MERS-CoV by month\* and place of probable infection, March 2012 - 19 December 2013 (N=165\*)



\* Where the month of onset is unknown the month of reporting has been used.

\*\* Data for December 2013 incomplete

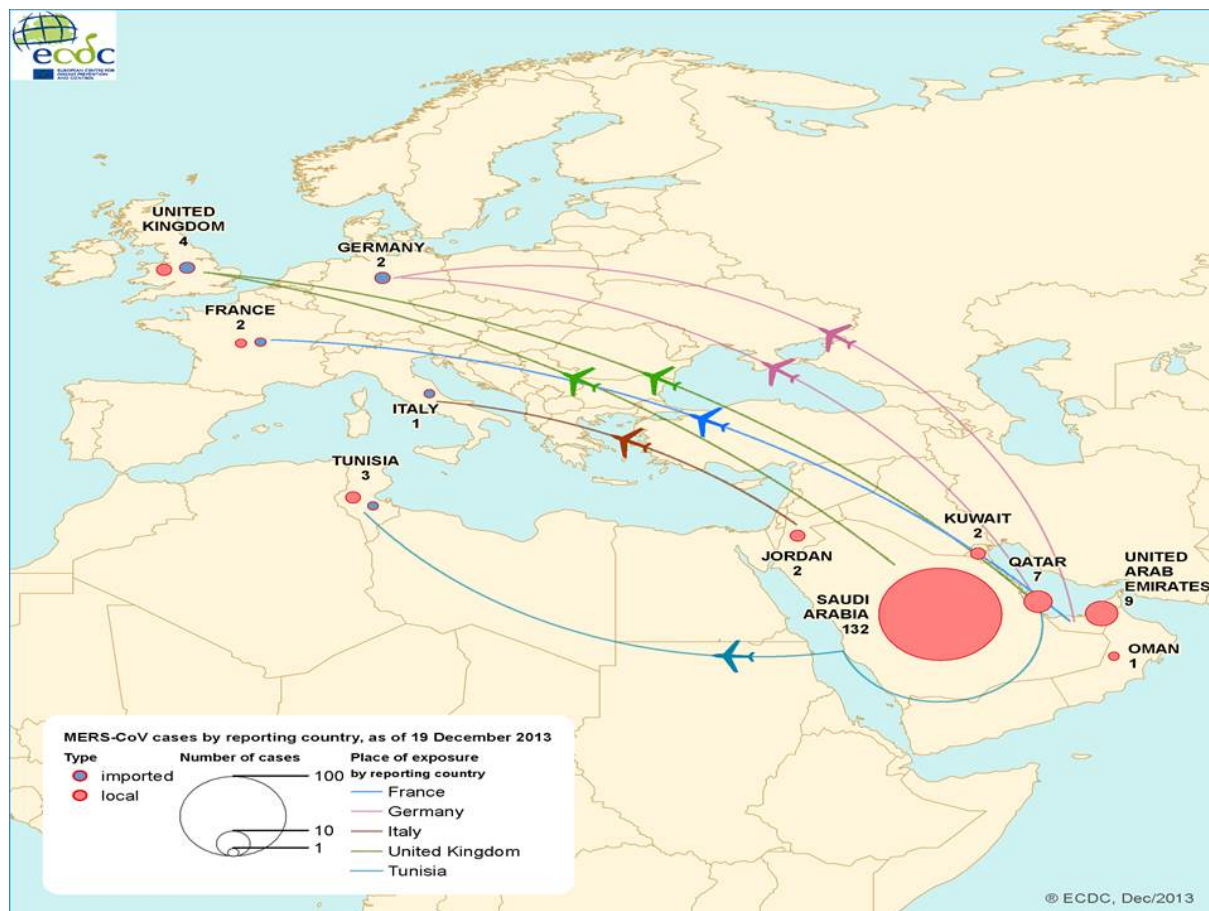
## Distribution of confirmed cases of MERS-CoV by age and gender, March 2012 - 19 December 2013 (n=158\*)



\*7 cases for which age or sex data is missing have been excluded

## Distribution of confirmed MERS-CoV cases by place of reporting, March 2012-19 December 2013 (N=165\*)

ECDC



## Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 12 December 2013

### Epidemiological summary

**Europe:** An isolated case of autochthonous dengue (local transmission) was diagnosed in the department of Bouches du Rhône in France on 21 October 2013. Active case finding in the area has not identified any further cases to date. The risk of detecting further autochthonous cases is minimal due to the low uptake of the mosquito *Aedes albopictus* (Asian tiger mosquito) in the area and the arrival of the winter period, according to Institut de Veille Sanitaire ([InVS](#)).

**Asia:** As of 2 December, the authorities in Delhi, India have recorded 5 387 cases and six deaths. In Pakistan, Sindh province continues to report dengue activity and the most affected municipality is Karachi with 4 587 cases and 25 deaths. The recent trend has increased in the Punjab province.

**Caribbean:** Despite a recent declining trend over the past four weeks on the French Caribbean island Saint Martin, the dengue

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epidemic is still ongoing and 3 095 dengue cases have been recorded since the beginning of the year. InVS reported a second dengue related death in Saint Martin this week. The dengue outbreak on Martinique continues despite a recent downward trend. DENV-2 remains the predominant serotype. In Saint-Barthélemy, the number of new dengue infections has decreased but the outbreak is still active with 966 cases and one death reported since March 2013. The recent trend is increasing in Saint Lucia and the latest update from the US Centers for Disease Control and Prevention ([US CDC](#)) reports that Puerto Rico has recorded nearly 16 000 suspected dengue cases (up to week 41) so far this year.

**Americas:** High dengue activity is reported across most states of Mexico. In Central America, the recent trend has decreased in Honduras and as of 5 December 2013, 37 666 cases and 27 deaths have been reported nationally, according to the Honduras Ministry of Health. In South America, Venezuela recorded 52 587 cases during the first 11 months of the year and 545 (1%) of these were severe dengue cases. According to a scientific opinion article published on the [Nature website](#), the risk of dengue at venues in Brazil during the 2014 FIFA football World Cup may reach peak transmission season in Fortaleza, Natal, and Salvador states. In French Guiana, the dengue epidemic in Kourou is considered to be over, according to [InVS](#).

**Oceania:** French Polynesia continues to report dengue activity with Tahiti and Morrea the most affected areas.

**Websources:** [ECDC Dengue](#) | [Healthmap Dengue](#) | [MedISys](#) | [ProMED Asia update](#) | [ProMED Americas update](#) |

## ECDC assessment

South-East Asia, Central America and the Caribbean appear to be experiencing a severe season this year.

ECDC monitors individual outbreaks, seasonal transmission patterns and inter-annual epidemic cycles of dengue through epidemic intelligence activities in order to identify significant changes in disease epidemiology. Of particular concern is the potential for the establishment of dengue transmission in Europe. Before the 2012 outbreak in the Autonomous Region of Madeira, local transmission of dengue was reported for the first time in France and Croatia in 2010. Imported cases are being detected in European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

## Actions

ECDC has published a technical [report](#) on the climatic suitability for dengue transmission in continental Europe and [guidance for invasive mosquitoes' surveillance](#).

From week 28 onwards, ECDC has been monitoring dengue on a bi-weekly basis.

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

Opening date: 8 September 2005

Latest update: 19 December 2013

### Epidemiological summary

#### **Worldwide**

As of 18 December 2013, 360 cases of poliomyelitis have been notified to WHO compared with 214 for the same period in 2012. Eight countries have recorded cases in 2013: Somalia (183), Nigeria (50), Pakistan (75), Kenya (14), Afghanistan (11), Ethiopia (6), Syria (17) and Cameroon (4).

#### **Israel**

Although no case of paralytic polio has been reported, environmental surveillance suggests that WPV1 transmission, first detected in February 2013, continues in parts of southern and central Israel. WPV1-positive samples were also detected in the occupied Palestinian territory (three sites).

#### **Syria**

No new WPV1 cases were reported in the past week. The total number of WPV1 cases remains 17. Prior to the outbreak, wild poliovirus was last reported in Syria in 1999. Genetic sequencing indicates that the isolated viruses are most closely linked to the virus detected in environmental samples in Egypt in December 2012 (which in turn has been linked to wild poliovirus circulating in Pakistan). The strain is also closely related to the wild poliovirus strains that have been detected in environmental samples in Israel and the occupied Palestinian territory since February 2013. A comprehensive outbreak response is being implemented across the region.

The joint WHO/UNICEF [draft strategic plan](#) for outbreak response in the Middle East was published on 26 November 2013.

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Web sources: [Polio Eradication: weekly update](#) | [MedISys Poliomyelitis](#) | [ECDC Poliomyelitis factsheet](#) | [WHO mission to Israel](#) | [Somalia Humanitarian Bulletin](#)

## ECDC assessment

Europe is declared polio free. The last polio cases in the EU occurred in 2001 in Bulgaria with a WPV that originated from India. The latest outbreak in the WHO European Region was in Tajikistan in 2010, when WPV1 imported from Pakistan caused an outbreak of 460 reported cases. The last indigenous WPV case in Europe was in Turkey in 1998. An outbreak in the Netherlands in a religious community opposed to vaccinations caused two deaths and 71 cases of paralysis in 1992.

The recent detection of WPV in environmental samples in Israel and the confirmed cases in Syria highlight the risk of re-importation in 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 on 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 will be followed weekly.

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