COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 10, 5-11 March 2017

All users

This weekly bulletin provides updates on threats monitored by ECDC.

News

A measles outbreak in Romania has been ongoing since February 2016 and cases continue to be reported despite ongoing response measures being implemented at the national level through reinforced vaccination activities.
As of 3 March 2017, 3 196 cases had been reported to the National Institute of Public Health in Romania since October 2016. In addition, several other EU Member States are reporting cluster of measles cases including Austria, Belgium, France, Germany, Hungary, Italy, Spain and Sweden. Some of the reported cases are nosocomial clusters such as in Hungary involving healthcare personnel. In addition, some of the ongoing measles outbreaks have been epidemiologically-linked to the current outbreak in Romania, however further investigations are needed to gain more insights into the epidemiological links.
The current measles outbreaks in Europe are attributed to low vaccination coverage and accumulation of susceptible people who are either un- or under-immunised. Immunisation is the only effective preventive measure against acquiring measles. The latest available data from WHO (from 2015) shows that the vaccination coverage for measles containing vaccines is suboptimal in a number of EU/EEA countries.
In order to raise awareness, ECDC will start to monitor measles transmission and outbreaks in the EU/EEA countries on weekly basis through epidemic intelligence activities.

I. Executive summary

EU Threats

Influenza – Multistate (Europe) – Monitoring 2016/2017 season

Opening date: 13 October 2016 Latest update: 10 March 2017

Influenza transmission in Europe shows a seasonal pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the Flu News Europe website.

➔Update of the week
During week 9 - 2017, influenza activity across the region, while decreasing, remained above levels observed during the out-of-season period.

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Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 10 March 2017

A measles outbreak in Romania has been ongoing since February 2016 and cases continue to be reported despite implemented and ongoing response measures at national level through reinforced vaccination activities. As of 3 March 2017, 3 196 cases had been reported to the National Institute of Public Health in Romania since the end of September 2016.
In 2016, measles outbreaks were seen in a number of EU/EEA countries; and an increase in the number of cases continues to be observed in 2017. Previous and ongoing measles outbreaks in three other EU countries have been epidemiologically linked to the current outbreak in Romania. However, additional knowledge on genotypic characterisation of the virus is needed to allow further insight into the epidemiological investigations.

➔Update of the week
In the EU/EEA Member States, measles cases are reported in Austria, Belgium, France, Germany, Hungary, Italy, Spain and Sweden as well as in Romania where a large measles outbreak is ongoing with 3 196 cases reported as of 3 March 2017.

Non EU Threats

Yellow fever – South America – 2016/2017

Opening date: 16 January 2017 Latest update: 10 March 2017

Yellow fever is a mosquito-borne viral infection present in some tropical areas of Africa and South America.

In South America, there are two transmission cycles of yellow fever:
- A sylvatic cycle, involving transmission of the virus between *Haemagogus* or *Sabethes* mosquitoes and primates. The virus is transmitted by mosquitoes from primates to humans when humans are visiting or working in the forest.
- An urban cycle, involving transmission of the virus between *Aedes aegypti* mosquitoes and humans. The virus is usually introduced in an urban area by a viraemic human who was infected in the forest.

Brazil has been experiencing an outbreak of yellow fever since December 2016. The outbreak was notified on 6 January 2017.

➔Update of the week
Between 24 February and 6 March 2017, Brazil reported 95 additional cases of yellow fever (50 suspected and 45 confirmed), mostly in Espírito Santo (41) and Minas Gerais (28). No additional state has reported autochthonous transmission.

On 6 March, the World Health Organization updated its recommendations on yellow fever vaccination for international travellers related to the current situation in Brazil.

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013 Latest update: 10 March 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 3 March 2017, 1 258 cases have been reported to WHO, including at least 404 deaths. 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. Four hundred and sixty cases were reported since week 40/2016, representing a significant increase compared to previous seasons.

➔Update of the week
Since the last update, no new cases of influenza A(H7N9) have been reported by WHO.

According to the health authorities in Hong Kong, between 26 February and 4 March 2017, there were 23 new human cases of avian influenza A(H7N9) reported by mainland China health authorities in Guangdong (6), Anhui (4), Guangxi (4), Jiangsu (3), Jiangxi (2), Hubei (1), Hunan (1), Shanghai (1) and Zhejiang (1). Since March 2013 and as of 6 March 2017, there were of 1 282 human cases of avian influenza A(H7N9) reported globally. Since October 2016 and as of 6 March 2017, 477 cases have been recorded in mainland China.

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

Opening date: 24 September 2012 Latest update: 10 March 2017

Since April 2012 and as of 9 March 2017, 1 931 cases of MERS, including 741 deaths, have been reported by health authorities worldwide. 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 last update of MERS-CoV on 8 February 2017, there have been 18 cases of MERS-CoV reported in Saudi Arabia, Alasyah (1),
Almukhaw (1), Alzulfi (1), Bisha (1), Hail (1), Jeddah (3), Khaybar (1), Mahayel (1), Makkah (1), Riyadh (3), Wadi Aldawasir (3) and place is unknown for one case.
Of the 18 cases, 14 were male, three were female and gender is unknown for one of the cases. Ten cases reported camel contact including drinking raw camel milk. One of the three cases reported from Wadi Aldawasir is due to nosocomial transmission.

Chikungunya, Dengue and Zika – Multistate (World) – Monitoring global outbreaks

Opening date: 27 January 2017 Latest update: 10 March 2017

Chikungunya, dengue and Zika virus infections are vector-borne diseases that affect from 50 to 100 million people each year. In the past decade, all three diseases have been reported across an increasingly wide area of the world. Chikungunya is present in Asia, Africa and, since 2013/2014, in the Caribbean, the Americas and the Pacific. Dengue is present in Asia, the Pacific, the Caribbean, the Americas and Africa. Zika is also present in Asia, the Pacific, the Caribbean, the Americas and Africa. No autochthonous chikungunya, dengue and Zika cases, related to vector-borne transmission were detected in EU/EEA Member States in 2016.
From 1 February to 18 November 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constituted a public health emergency of international concern (PHEIC). Since 2015, and as of 9 March 2017, 72 countries and territories have reported evidence of mosquito-borne transmission of the virus.

➔Update of the week

Monthly summary

This month, the significant events for dengue, chikungunya and Zika are:
- Currently, the two main serotype circulating in the Pacific are DENV 2 in Fiji, Solomon Islands, American Samoa and Vanuatu and DENV 1 in French Polynesia. New Caledonia report circulation of DENV 1, 2 and 3.
- Formosa Province (Argentina) reported the first locally-acquired case of Zika virus infection.

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II. Detailed reports

Influenza – Multistate (Europe) – Monitoring 2016/2017 season

Opening date: 13 October 2016 Latest update: 10 March 2017

Epidemiological summary

Week 9 - 2017 (27 February – 5 March 2017)
Influenza activity across the region, while decreasing, remained above levels observed during the out-of-season period.
The proportion of influenza virus detections among sentinel surveillance specimens decreased to 26% from 33% in the previous week.
The majority of detected and subtyped influenza viruses were A(H3N2) and while the proportion of type B viruses increased, as commonly seen in the second half of an influenza season, their numbers remained low.
The number of hospitalized laboratory-confirmed influenza cases reported, primarily in people aged 65 years or older, continued to decrease.

Season overview
Influenza activity started early this season in week 46/2016, which is the earliest week that the overall influenza-positivity rate in sentinel specimens reached 10% since the emergence of A(H1N1)pdm09 viruses in 2009/10.
Since week 40/2016, influenza A viruses have predominated, accounting for 94% of all sentinel detections; the great majority (99%) of subtyped influenza A viruses from sentinel sites being A(H3N2).
Confirmed cases of influenza virus type A infection reported from hospitals have predominantly been in adults aged over 65 years.
Excess all-cause mortality has been observed substantially in people aged 15–64 years and markedly in people aged 65 years or older in the majority of the 19 reporting countries. This is commonly seen when the predominant viruses circulating are A(H3N2).
Two-thirds of the A(H3N2) viruses genetically characterized belong to a recently emerged genetic subclade (3C.2a1). However, those that have been antigenically characterized are largely similar to the clade 3C.2a vaccine virus.
Recent vaccine effectiveness estimates for all age groups against A(H3N2) illness from Canada (42%), the US (43%) and Europe (38%) are consistent with estimates from Stockholm county (28%) and Finland (32%) earlier in the season.
Given typically suboptimal vaccination coverage and the partial effectiveness of influenza vaccines, rapid use of neuraminidase inhibitors (NAIs) for laboratory-confirmed or probable cases of influenza infection should be considered for vaccinated and non-vaccinated patients at risk of developing complications.
No reduced susceptibility to oseltamivir or zanamivir has been observed for any of the viruses tested so far this season.

The WHO recommendations for the composition of the 2017/2018 northern hemisphere vaccine, published on 2 March 2017, call for the replacement of the A(H1N1)pdm09 component with an A/Michigan/45/2015 A(H1N1)pdm09-like virus.

ECDC assessment

Influenza activity started early this season in week 46/2016, which is the earliest week that the overall influenza-positivity rate in sentinel specimens reached 10% since the emergence of A(H1N1)pdm09 viruses in 2009/10. The progression of the season confirms the conclusions of ECDC's latest risk assessment published on 25 January 2017. Severe outcomes are expected in the elderly because of the large circulation of A(H3N2), which could result in some healthcare systems experiencing additional pressure.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the Flu News Europe website. Risk assessments for the season are available on ECDC website and on WHO Regional Office for Europe website.

Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 10 March 2017

Epidemiological summary

EU/EEA Member States

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Austria
Since the beginning of 2017 and as of 1 of March, 69 measles cases were reported in Austria – more than the total number of cases reported throughout 2016.

Belgium
In Belgium, between 20 December 2016 and 24 February 2017, 75 cases, of which 30 were laboratory confirmed, were reported in the region of Wallonia. Five cases were among healthcare workers. All cases were infected with a genotype B3 strain, the same strain that was reported to have circulated in Austria, Italy and Romania at the end of 2016. The index case visited Romania during the incubation period.

France
As of 3 March 2017, 44 cases of measles have been reported since 30 January 2017 in the areas of Metz and Forbach in the Moselle region. Seventy-five percent of the cases concern children.

Germany
In Germany measles cases were reported from Wiesbaden, Duisburg, Berlin and Baden-Württemberg.
As of 7 March 2017, 60 cases of measles have been reported in Wiesbaden.
Since the beginning of February, Duisburg reported 77 cases of measles. Of the 61 affected children, 22 were younger than one year.
As of 3 March, 30 cases of measles have been reported in Berlin since the beginning of the year. Most patients come from Reinickendorf (12), followed by Spandau with seven patients. Other cases were recorded in Marzahn-Hellersdorf (3), Mitte (3), Tempelhof-Schöneberg (2), Friedrichshain-Kreuzberg (2) and Charlottenburg-Wilmersdorf (1).
As of 3 March 2017, 19 cases of measles have been reported in Baden-Württemberg.

Hungary
On 4 March 2017, the Ministry of Health of Hungary reported a nosocomial measles outbreak in a hospital in Csongrad among healthcare workers. Four cases have been confirmed and further cases are under investigation.

Italy
In Italy cases of measles were reported at national level, as well as from Piedmont and Florence.

In January 2017, 238 cases of measles were reported in 15 Italian regions.
In the first two months of 2017, 145 cases were reported in Piedmont, mainly in the Torinese, 72% of cases are over 20 years.
Two measles cases, both healthcare workers, have been reported in a hospital in Florence.

Romania – update
Between 1 January 2016 and 3 March 2017, 3 196 cases of measles, including 16 fatalities, have been reported in Romania. All these cases are either laboratory-confirmed or have an epidemiological link to a laboratory-confirmed case. Infants and young children are the most affected population. Thirty-seven of the 42 districts report cases, Caras Severin (West part of the country, at the border with Serbia) being the most affected district with 726 cases. Vaccination activities are ongoing in order to cover communities with suboptimal vaccination coverage.

Spain, Barcelona -update
As of 3 March 2017, 27 cases of measles have been confirmed. The outbreak began in the first week of January from a case imported from China. The confirmed cases are 2 children and the rest are adults from 24 to 54 years of age, all of them not vaccinated or incompletely vaccinated; 6 of the cases have required hospitalization.

Sweden, Stockholm
As of 8 March 2017, seven cases of measles have been reported in the Stockholm area. Two adults and five children, two years old, infected during four occasions.

ECDC assessment

The progress towards elimination of measles in the European Region of WHO is assessed by The European Regional Verification Commission for Measles and Rubella Elimination (RVC). Member States of the WHO European Region are making steady progress towards the elimination of measles. At the fifth meeting of the RVC for Measles and Rubella in October 2016, of 53 countries in the WHO European Region, 24 (15 of which are in EU/EEA) were declared to have reached the elimination goal for measles, and an additional 13 countries (nine in EU/EEA) were concluded to have interrupted endemic transmission for less than 36 months, meaning they are on their way to achieving the elimination goal. However, six EU/EEA countries were judged to still have endemic transmission of measles: Belgium, France, Germany, Italy, Poland, Romania.

Source: WHO - Europe

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Actions

ECDC has prepared a Rapid Risk Assessment published on 6 March 2017. ECDC monitors measles transmission and outbreaks in the EU on weekly base through enhanced surveillance and epidemic intelligence activities.

Yellow fever – South America – 2016/2017

Opening date: 16 January 2017 Latest update: 10 March 2017

Epidemiological summary

On 6 January 2017, Brazil reported an outbreak of yellow fever. The index case had onset of symptoms on 18 December 2016. The first laboratory confirmation was notified on 19 January 2017.

As of 6 March 2017, Brazil has reported 1 337 cases of yellow fever (966 suspected and 371 confirmed), including 233 deaths (106 suspected and 127 confirmed), in seven states. The case-fatality rate is 17.4% among all cases and 34.2% among confirmed cases.

States reporting suspected and confirmed autochthonous cases:
- Minas Gerais has reported 1 057 cases (769 suspected and 288 confirmed), including 188 deaths (83 suspected and 105 confirmed).
- Espírito Santo has reported 226 cases (147 suspected and 79 confirmed), including 37 deaths (18 suspected and 19 confirmed).
- São Paulo has reported 15 cases (11 suspected and four confirmed), including five deaths (two suspected and three confirmed).

States reporting suspected autochthonous cases:
- Bahia has reported seven suspected cases, including one fatal.
- Tocantins has reported six suspected cases, including one fatal.
- Rio Grande do Norte has reported one suspected case, fatal.
- Goiás has reported one suspected case, not fatal.

In addition, investigations are ongoing to determine the probable infection site of 24 further suspected cases.

The Ministry of Health of Brazil has launched mass vaccination campaigns in addition to routine vaccination activities. As of 6 March 2017, 14.85 million extra doses of yellow fever vaccine have been sent to five states: Minas Gerais (6.5 million), São Paulo (3.25 million), Espírito Santo (3.15 million), Rio de Janeiro (1.05 million) and Bahia (900 000).

Sources: Brazil MoH

ECDC assessment

The ongoing outbreak should be carefully monitored, as the establishment of an urban cycle of yellow fever would have the potential to quickly affect a large number of people.

EU/EEA citizens who travel to, or live in, areas where there is evidence of yellow fever virus transmission should check their vaccination status and get medical advice about getting vaccinated against yellow fever.

In Europe, *Aedes aegypti*, the primary vector of yellow fever in urban settings, is present in Madeira. Recent studies have shown that *Aedes albopictus* can potentially transmit the yellow fever virus.

However, the risk of the virus being introduced into local competent vector populations in the EU through viraemic travellers from Brazil is considered to be very low, as the current weather conditions in Europe are not favourable for vector activity.

Actions

ECDC closely monitors this event in collaboration with the World Health Organization. ECDC published a rapid risk assessment on 26 January 2017, and is producing epidemiological updates and a map for travel advice.

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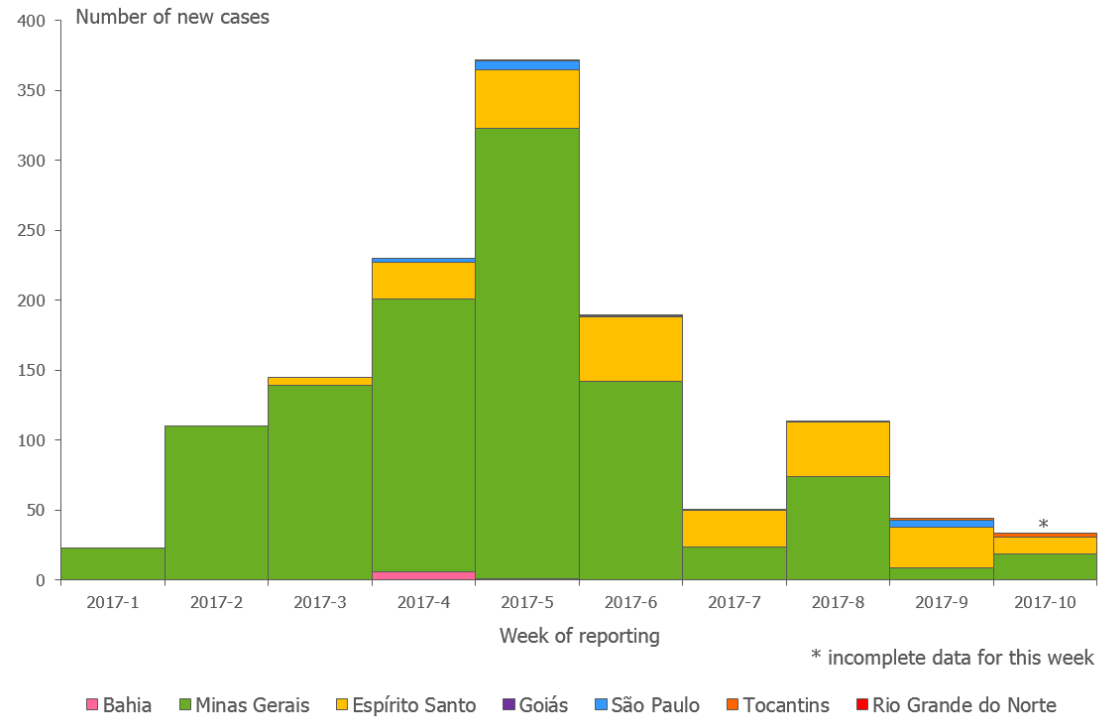
Distribution of suspected and confirmed human cases of yellow fever by week, Brazil, 2017, as of 6 March



Distribution of human cases of yellow fever by state, Brazil, 2017, as of 6 March

	All cases	Suspected cases	Confirmed cases
Minas Gerais	1 057	769	288
Espírito Santo	226	147	79
São Paulo	15	11	4
Bahia	7	7	0
Tocantins	6	6	0
Rio Grande do Norte	1	1	0
Goiás	1	1	0
Under investigation	24	24	0
Total	**1 337**	**966**	**371**

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013 Latest update: 10 March 2017

Epidemiological summary

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In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 3 March 2017, 1 258 cases have been reported to WHO, including at least 404 deaths. The A(H7N9) outbreak shows a seasonal pattern. Cases reported between weeks 41, and 40 in the subsequent year are considered to belong to one epidemic wave. The first wave in spring 2013 (weeks 7/2013–40/2013) included 135 cases; 320 cases were reported during the second wave (weeks 41/2013–40/2014), 224 cases were reported during the third wave (weeks 41/2014–40/2015), and 119 were reported in wave four (weeks 41/2015–40/2016). A fifth wave started in October 2016 (week 41/2016), with 460 cases as of 3 March 2017.

The 1 258 cases have been reported from Zhejiang (298), Guangdong (247), Jiangsu (233), Fujian (98), Anhui (88), Hunan (63), Shanghai (55), Jiangxi (41), Hubei (24), Hong Kong (20), Shandong (14), Henan (11), Beijing (11), Xinjiang (10), Sichuan (8), Guizhou (8), Guangxi (6), Taiwan (5), Hebei (4), Liaoning (3), Macau (2), Yunnan (2), Tianjin (2), Jilin (2).

Three imported cases have been reported: one in Malaysia and two in Canada.

Web sources: Chinese CDC | WHO |WHO FAQ page | ECDC | Hong Kong CHP

ECDC assessment

This is the fifth northern hemisphere winter season with human cases due to A(H7N9) infections. During this wave, the number of human cases is already higher than during the whole last wave in 2015–2016, with a significantly higher number than in the same period of the two previous epidemic seasons. A steep increase of human cases has been reported since the beginning of December 2016 from China. The mode of transmission does not seem to have changed during this season. The majority of recently reported human cases are associated with exposure to infected live poultry or contaminated environments, including markets where live poultry are sold. The age distribution of the reported cases is comparable with previous waves. Influenza A (H7N9) viruses continue to be detected in poultry and environments where poultry are present in the areas where human cases are occurring. However, more human cases are detected in rural areas. The upsurge of human cases is most likely due to a higher environmental contamination related to live bird markets.

EU citizens living or visiting influenza A(H7N9)-affected areas in China are advised to avoid live bird markets or backyard farms as well as contact with live poultry or their droppings. Food should be only consumed if properly cooked. Since environmental contamination leads to a higher risk of exposure to A(H7N9), it is also possible that travel-related cases could be detected in Europe. The recent upsurge of human cases due to a higher risk of exposure indicates the possibility of sporadic cases being imported to Europe. However, the risk of the disease spreading in Europe through humans is considered low, as the virus does not appear to transmit easily from person-to-person.

The ECDC risk assessment and the options for response have not changed since the last rapid risk assessment in January 2017. However, these new developments need to be monitored and assessed. ECDC will continue to follow the epidemiological and scientific developments related to avian influenza A(H7N9) virus and will continue to work with public health and veterinary experts in the EU/EEA Member States, WHO and other international partners.

Actions

ECDC published an updated Rapid Risk Assessment on 27 January 2017 and a Public Health Development on 24 February 2017. ECDC is preparing an updated risk assessment.

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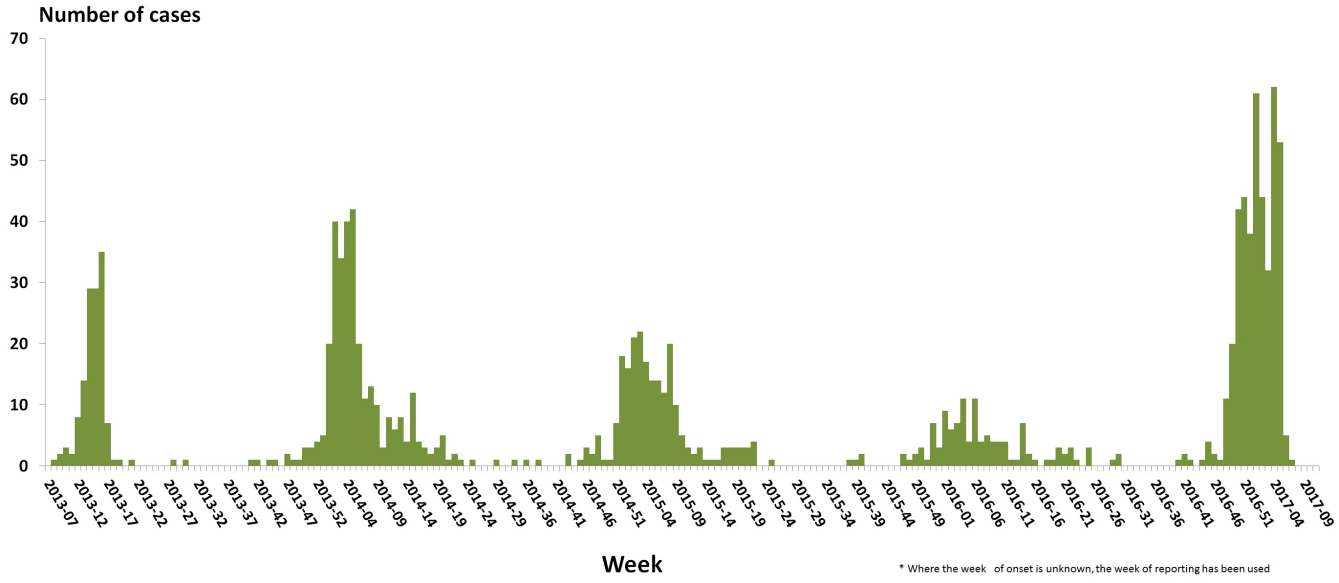
Distribution of confirmed cases of A(H7N9) by first available week, February 2013 to 8 March 2017

ECDC, WHO



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

Opening date: 24 September 2012 Latest update: 10 March 2017

Epidemiological summary

Since April 2012 and as of 9 March 2017, 1 931 cases of MERS, including 741 deaths, have been reported by health authorities worldwide.

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 | ECDC factsheet for professionals

ECDC assessment

The risk of sustained human-to-human transmission in Europe remains very low. The 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 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.

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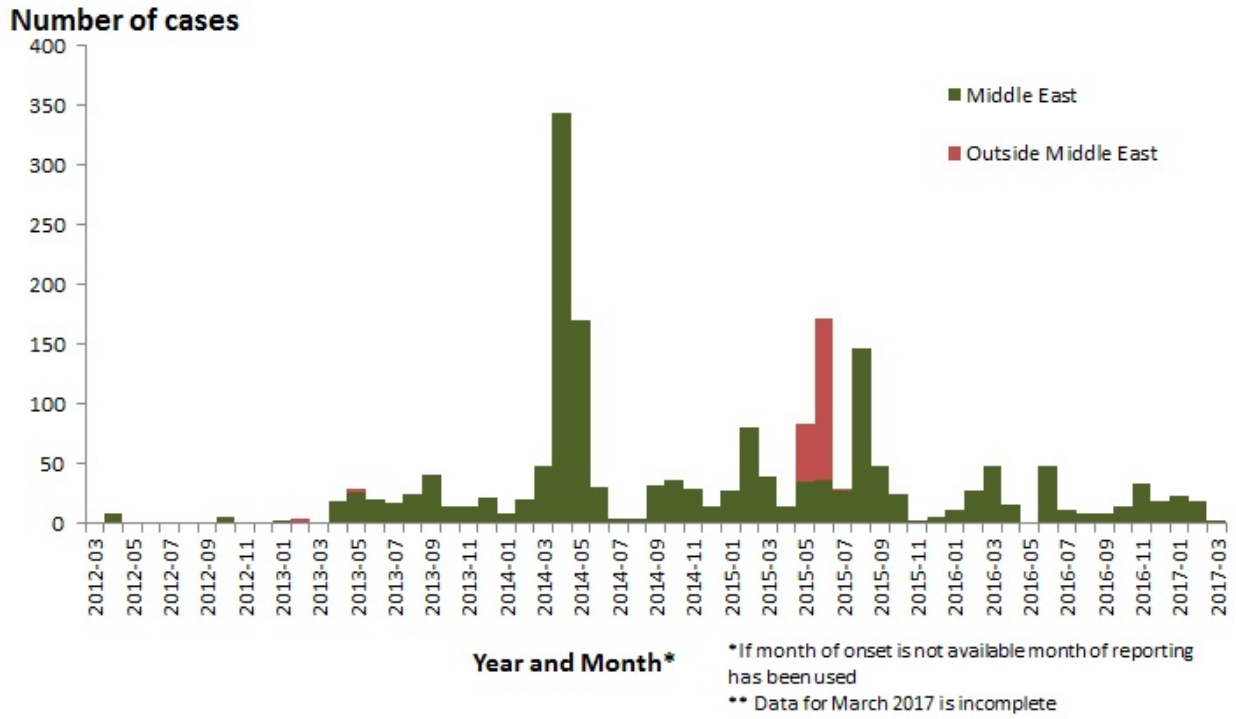
Distribution of confirmed cases of MERS-CoV by probable place of infection and country of reporting, March 2012 – 8 March 2017 (n=1 931)

ECDC, Saudi Arabia, WHO



Chikungunya, Dengue and Zika – Multistate (World) – Monitoring global outbreaks

Opening date: 27 January 2017 Latest update: 10 March 2017

Epidemiological summary

Europe

No autochthonous cases of chikungunya and dengue virus infection have been reported in EU Member States in 2016 and 2017.

No mosquito-borne Zika virus transmission has been reported in EU/EEA. As of 1 February 2017, seven countries (France, Germany, Italy, Netherlands, Portugal, Spain, the UK) reported person-to-person Zika virus transmission.

Since June 2015 (week 26) and as of 7 March 2017, 21 countries (Austria, Belgium, Czech Republic, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, the UK) have reported 2 109 travel-associated Zika virus infections through The European Surveillance System (TESSy). Over the same time period, eight EU/EEA Member States reported 108 Zika cases among pregnant women.

Americas and the Caribbean

Chikungunya

Since the beginning of 2017 and as of 3 March, PAHO has reported 4 624 suspected and confirmed cases in the Americas and Caribbean region. Most cases are reported by Brazil (3 754), Colombia (249), Panama (207) and Peru (194).

Dengue

Since the beginning of 2017 and as of 27 February, PAHO has reported 30 869 suspected and confirmed cases, including 17 deaths, in the Americas and Caribbean region. Most cases are reported by Nicaragua (6 247), Colombia (5 696), Puerto Rico (4 235) and Peru (3 797).

Although for 2017 no national data are yet reported by Brazil, several areas in Brazil (Federal district, Mato Grosso, Ribeirão, Sesau and Rio de Janeiro) reported a significant decrease of dengue cases in January 2017 compared to January 2016.

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Zika
On 2 March, Florida reported two additional locally acquired cases which occurred in 2016 and the first case accounted for 2017. The latter was asymptomatic and had multiple exposure in Miami-Dade County in 2016. Although it is unclear when the infection occurred, this is considered the first Zika case in 2017 as the positive sample was collected in January.

Mexico reported 86 cases of Zika virus infection in the first eight weeks of the year. The country is still showing a decreasing trend.

In Argentina, Chaco Province reported one confirmed case of Zika virus infection on 22 February 2017. The patient is a woman living in Presidencia Roque Sáenz Peña city, Chaco Province, but with recent travel history in Formosa Province which is the probable site of infection. In addition, Salta Province reported one confirmed Zika case in a 26-year-old male. The site of infection is currently under investigation.

Asia

Chikungunya
Chikungunya fever cases are reported from India (New Delhi) and Pakistan.

In India, media quoting authorities are reporting 26 chikungunya cases from the beginning of 2017 to 11 February, which corresponds to the low transmission season.

Since 19 December 2016 and as of 1 March 2017, 803 cases have been reported in Sindh Province (Pakistan), including 29 cases reported in various towns in Karachi during the week of 10-16 February 2017. This is an increase of 293 cases since the last monthly update on 3 February.

Dengue
In 2017, the most affected countries in Asia are Malaysia and Sri Lanka. Sri Lanka and Laos were reporting more dengue cases than the previous year during the same period, while Malaysia, Cambodia and Singapore reported less cases.

In Cambodia, as of 17 February 2017, 95 suspected dengue cases were reported in 2017, which was lower than the number of cases during the same period in 2014-2016.

As of 31 January 2017, 34 cases of dengue were reported in China in 2017, which is comparable to the same period in 2016 (28 cases reported).

Laos has reported 390 cases as of 17 February 2017. The number of cases is higher than in the same period in 2016 and 2015.

Since the beginning of 2017 and as of 19 February, Malaysia has reported 12 576 dengue cases, which is lower than in 2016 for the same period (22 518).

Since the beginning of 2017 and as of 18 February, Singapore has reported 592 cases. This is relatively low compared to the same period in 2016.

In January 2017, Sri Lanka reported the highest number of dengue cases since 2010: 10 144 cases. In previous years (2010-2016) the number of dengue cases reported in the first month of the year varied between 933 and 6 694. One of the reasons for the high number of cases could be the circulation of DENV 2, which had occurred after a lapse of seven years.

Zika
In Singapore, five Zika cases have been reported in the first nine weeks of 2017.

In the Philippines, new locally-acquired cases have being reported on 3 February 2017, bringing the number of Zika cases to 57.

On 27 February 2017, New Zealand reported one case of Zika virus infection in a returning traveller from Thailand.

Pacific region and Australia

Chikungunya
No outbreaks detected.

Dengue
As of 28 February 2017, there were 202 laboratory-confirmed dengue cases reported in Australia in 2017. The number of cases

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reported is lower than that reported during the same time period in the previous years (2012-2016). A few outbreaks of dengue were reported in January and February: in Cairns (DENV 1) with two confirmed local cases, in Innisfail (DENV 1) with five confirmed local cases, in Townsville (DENV 2) with one confirmed local case and in Boigu Island (DENV 2) with six confirmed local cases.

As of 3 March, Fiji has recorded 155 cases of dengue fever in 2017. In a statement issued by the Ministry of Health, the Western Division recorded the highest number of cases (91), the Northern Division has 32 cases and the Central/Eastern Division has 32 cases.

As of 5 February 2017, 845 cases of dengue were reported in Philippines in 2017, including nine deaths, which is an increase of cases in the first month of the year.

French Polynesia reported 29 confirmed dengue cases between 15 and 29 January 2017. Seven (24%) of them were confirmed as DENV-1 infection.

Since the beginning of 2017 and as of 6 March 2017, New Caledonia reported 1 074 cases (DENV 1, 2, 3). The number of reported cases is increasing since September 2016.

Since November 2016, a dengue (DENV 2) outbreak is ongoing in Vanuatu with 1 831 cases as of 2 March 2017, including 45 hospitalisations.

Since August 2016 and as of 5 February 2017, 10 095 suspected dengue (DENV 2) cases have been reported across all ten provinces of the Solomon Islands.

An increase in the number of dengue cases is reported in American Samoa (DENV 2).

Dengue serotype 4 is circulating in an ongoing outbreak in the Federated States of Micronesia.

Zika
No major developments detected in the last month.

Africa

Chikungunya: no major outbreak detected this month.

Dengue
Since December 2016, an outbreak of dengue is ongoing in Cape Verde. As of 31 January 2017, 23 cases have been confirmed. It is the same DENV 3 as in 2009. Dengue is detected in Cidade da Praia; from the other islands no cases are reported. Main part of the population is immune against serotype 3. Susceptibility is reduced and an as massive epidemic as in 2009 is not expected.

Zika
No major developments detected in the last month.

ECDC assessment

Chikungunya
Outbreaks are still ongoing in the Americas but at a lower level than during the same period in 2015, except for Brazil that reported significantly more cases in 2016 compared to 2015.

Dengue
Dengue is widely spread in tropical and subtropical regions. Introduction and autochthonous transmission of dengue fever in Europe is possible where competent vectors are present.

Zika
The circulation of the Zika virus in the Americas and Asia is likely to continue as the vectors (*Aedes aegypti* and *Aedes albopictus* mosquitoes) are widely distributed there. As neither treatment nor vaccines are available, prevention is based on personal protection measures. Pregnant women should consider postponing non-essential travel to Zika-affected areas.

Europe is vulnerable to the autochthonous transmission of arboviruses. The risk of onward transmission in Europe is linked to importation of the virus by viraemic patients in areas with competent vectors (*Aedes albopictus* in mainland Europe, primarily around the Mediterranean, and *Aedes aegypti* on Madeira). Autochthonous transmission from an imported viraemic case is possible during the summer season in the EU/EEA. Continued vigilance is needed to detect imported cases in tourists returning to the EU from affected regions.

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Actions

ECDC monitors these threats on a monthly basis. ECDC is preparing an update of the Zika risk assessment published on 28 October 2016.

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