COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 17, 23-29 April 2017

All users

This weekly bulletin provides updates on threats monitored by ECDC.

News

European Immunization Week 24-30 April 2017: Vaccines work

Protected from the threat of vaccine-preventable diseases, immunised children have a better chance of living a long and healthy life. The advantages are also further increased by vaccination during adolescence and adulthood. After general hygiene improvements, i.e. a clean water supply, vaccines represent the most effective and cost-saving public health intervention. However, vaccines continue to be underused all over the world.

ECDC supports the European Immunization Week campaign lead by WHO/Europe by providing scientific evidence on immunisation. Join the EIW initiative to increase vaccination coverage by raising awareness of the importance of immunisation.

ECDC activities during the European Immunization Week are centred around three main themes:
• Surveillance data on measles and rubella for 2016, including data on progress towards elimination.
Measles can be contracted at any age. Infants and children are often believed to be the only age groups affected by measles, but the disease also spreads among teenagers and adults.
• A catalogue of interventions addressing vaccine hesitancy that can be used as an inspiration for actions in the EU/EEA member states. The ECDC catalogue of interventions offers a collection of 40 interventions developed in various countries around the world in order to measure and address vaccine hesitancy.
• A survey report on Immunisation Information Systems (IIS), taking stock of current implementation in the EU/EEA member states and how they are used. IIS benefit individuals directly by ensuring vaccination according to the schedule. They also provide data to vaccine providers and public health authorities who have responsibility for the delivery and monitoring of an immunisation programme. This week Eurosurveillance is also publishing a special issue on IIS.

All materials available can be reused for non-commercial purposes.
A collection of communication guides on vaccine hesitancy can be found here.

I. Executive summary

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

EU Threats

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

Opening date: 13 October 2016 Latest update: 28 April 2017

Influenza transmission in Europe shows a seasonal pattern, with peak activity during winter months.

➔Update of the week

During week 2017-16 (17–23 April 2017), influenza activity across the region decreased further, with 38 of 39 countries reporting low intensity. The proportion of sentinel specimens testing positive for influenza viruses was 13%, slightly lower compared to the previous week (15%). The proportion of type B viruses exceeded the proportion of type A viruses in sentinel detections, similar to recent weeks. However, the overall number of type B virus detections remained low.

Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 28 April 2017

A measles outbreak in Romania has been ongoing since February 2016 and cases continue to be reported despite ongoing response measures that have been implemented at national level through reinforced vaccination activities. Between 1 January 2016 and 21 April 2017, Romania reported 4 881 cases. In 2016, a number of additional EU/EEA countries reported measles outbreaks, and an increase in the number of cases continues to be observed in 2017. Some previous and ongoing measles outbreaks in other EU countries have been epidemiologically linked to the current outbreak in Romania.

➔Update of the week

In EU countries, measles cases have been reported in 2017 in Austria, Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Hungary, Iceland, Italy, Portugal, Slovakia, Spain and Sweden as well as in Romania, where 4 881 cases had been reported as of 21 April 2017.

In non-EU countries, measles cases have been reported in 2017 in Afghanistan, Australia, Canada, Central African Republic, Ethiopia, Guinea, Liberia, Nigeria, Pakistan, Somalia, South Sudan, Switzerland, Syria, Ukraine and USA.

Rubella – Multistate (EU) – Monitoring European outbreaks

Opening date: 7 March 2012

Rubella, caused by the rubella virus and commonly known as German measles, is usually a mild and self-limiting disease which often passes unnoticed. The main reason for immunising against rubella is the high risk of congenital malformations associated with rubella infection during pregnancy. All EU Member States recommend vaccination against rubella with at least two doses of vaccine for both boys and girls. The vaccine is given at the same intervals as the measles vaccine as part of the MMR vaccine. No new outbreaks have been detected in the EU since June 2015.

➔Update of the week

No new outbreaks have been detected since June 2015.

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

Opening date: 12 December 2016 Latest update: 28 April 2017

From June 2016, confirmed hepatitis A cases, infected with three distinct strains of sub-genotype IA virus, have been reported by several EU countries. Most cases are reported among adult men who have sex with men (MSM), with only a small number of women affected. The main prevention measure in the context of the current outbreaks is the recommendation of hepatitis A vaccination for MSM. The ECDC guidance document 'HIV and STI prevention among men who have sex with men' encourages Member States to offer and promote vaccination of MSM against hepatitis A. In addition, information on vaccine availability should be included in health promotion programmes that target MSM (e.g. information at MSM sex venues).

➔Update of the week

Since the last ECDC rapid risk assessment published on 24 February, 10 EU Member States (Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Portugal, Sweden and the United Kingdom (Public health England and Health Protection Scotland)) reported 387 new confirmed cases infected with one of the three strains matching the three clusters currently circulating in the EU. As of 28 April 2017, 674 confirmed cases have been reported as associated with these outbreaks since 1 June 2016. Of the 665 cases with available information on gender, 531 (95%) are in males; of the 622 of these with available information on age, 558 (90%) are between 18 and 50 years of age. The majority of the cases with available information on sexual orientation (n=353, 83%) are in MSM.
The number of new confirmed cases associated with these outbreaks has been consistently increasing since summer 2016.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Non EU Threats

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013 Latest update: 28 April 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 27 April 2017, 1 422 cases have been reported to WHO, including at least 542 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. From week 41/2016, 624 cases have been reported, representing a significant increase compared to previous seasons.

➔Update of the week

Since the last update, 29 additional cases, including eight deaths, have been detected in China according to the health authorities in Hong Kong.

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

Opening date: 10 November 2016

The ECDC ELDSNet 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

On 21 April 2017, Ireland reported a case of Legionnaires' disease associated with travel to Dubai. The 62-year-old female had onset on 13 April and had stayed in a hotel in Dubai from 1 to 10 April. This hotel was visited by one case in the previous two-year period. A cluster notification regarding this hotel has been issued.

Detection of pathogenic bacteria in CRISPR Kit – Multistate

Opening date: 11 April 2017 Latest update: 28 April 2017

A do-it-yourself genetic engineering kit, 'The CRISPR Cas 9 Bacterial Genomic Editing Kit,' from a company in the US has been found positive for unexpected pathogenic microorganisms. This product is available to the general public and is for sale on the Internet.

➔Update of the week

No epidemiological update.

Yellow fever – South America – 2016/2017

Opening date: 16 January 2017 Latest update: 28 April 2017

Yellow fever is a mosquito-borne viral infection present in some tropical areas of Africa and South America. On 6 January 2017, Brazil reported an outbreak of yellow fever that started in December 2016 and that has been ongoing since then. Bolivia, Colombia, Ecuador, Peru and Suriname have also reported cases of yellow fever in 2017.

➔Update of the week

Between 12 and 20 April 2017, Brazil reported 155 additional cases of yellow fever (97 suspected and 58 confirmed). The additional confirmed cases have been reported in Espírito Santo (30), Minas Gerais (22), São Paulo (5) and Tocantins (1). This is the first confirmed autochthonous case reported in Tocantins since the beginning of the outbreak, although it is not a recent case. The additional confirmed cases reported in Espírito Santo and Minas Gerais are not recent cases either.

Between weeks 14 and 15 of 2017, Peru reported two additional suspected cases of yellow fever.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

II. Detailed reports

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

Opening date: 13 October 2016 Latest update: 28 April 2017

Epidemiological summary

Influenza activity started early this season in week 2016-46, 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 2009–2010.

ECDC assessment

The progression of the season confirms the conclusions of ECDC's risk assessment published on 25 January 2017.

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: 28 April 2017

Epidemiological summary

EU Countries with updates since last week

Belgium
Since 20 December 2016 and as of 16 April 2017, Wallonia reported 288 cases of which 163 confirmed, 81 probable, and 44 are clinical (ECDC 2012 definition). The outbreak affects all provinces of Wallonia, with the exception of the province of Luxembourg. Thirty-seven cases are among healthcare workers (31 confirmed, four probable, two possible). Of the 288 cases, 111 (38%) were hospitalised. Two cases of had acute encephalitis. No deaths are reported.

The index case of the epidemic in Wallonia travelled to Romania during the incubation period. In Flanders, one isolated imported case was reported in January and another in March, with possible links to a cluster in Wallonia. In the Brussels Capital Region, one isolated imported case was reported in February and two cases were notified in March without known links to the epidemic in Wallonia. Both imported cases had a travel history to Romania during the incubation period, and the national reference centre for measles, mumps and rubella (WIV-ISP) identified genotype B3, which is the same strain found in Romania, Italy and Austria, at the end of 2016.

Bulgaria
Since mid-March 2017 and as of 24 April, media in Bulgaria has reported 65 cases, of which 37 are confirmed, in the city of Plovdiv. This represents an increase by four cases since the last report. On 9 April 2017, Bulgaria reported one death of a 10-month-old unimmunised child.

Germany
Since the beginning of 2017 and as of 9 April 2017, Germany has reported 462 cases This is an increase by 52 cases since the previous update. In the same period in 2016, Germany reported 30 cases.

Italy
Since the beginning of 2017 and as of 23 April, Italy has reported 1 739 cases, with 159 cases among healthcare workers. The cases are reported from 18 of the 21 regions in Italy. Most of the cases are above the age of 15 years and 88% of the cases were not vaccinated, 33% reported one or more complications, 39% were hospitalised.

Portugal
Since the beginning of 2017 and as of 26 April 2017, Portugal has reported 25 confirmed cases, of which 16 (64%) are older than 18 years of age, 15 (60%) were unvaccinated, 12 (48%) are health professionals and 12 (48%) were hospitalised. One death has been reported.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu
Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Romania
Between 1 January 2016 and 21 April 2017, Romania has reported 4 881 cases of measles, including 22 deaths. 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-eight of the 42 districts have reported cases, Caras Severin (West part of the country, at the border with Serbia) being the most affected district with 943 cases. Vaccination activities are ongoing in order to cover communities with suboptimal vaccination coverage.
On 25 April, media reported an additional death, bringing the number of deaths to 23.

Slovakia
On 24 April 2017, Slovakia reported an imported case of measles. The case is a 25-year-old, unvaccinated Italian who studies in Kosice. The last endemic cases in the Slovak Republic were reported in 1998 and the last imported cases of measles were reported in 2011 and 2012.

EU countries with no updates since the last week

Austria
Since the beginning of 2017 and as of 12 April, Austria has reported 71 cases, which exceeds the cumulative number of cases reported in 2016.

Denmark
On 15 March 2017, Denmark reported an imported case of measles in an unvaccinated adult who was infected during a holiday in Asia.

Czech republic
As of 10 April 2017, 38 cases of measles have been reported in the Moravian-Silesian region of the Czech Republic. Twenty of the cases are children below the vaccination age and 18 are adults. Of the 18 adults, six are healthcare workers. According to media, a hospital has been closed due to hospital staff being infected.

France
Since 1 January and as of 31 March 2017, France reported 134 cases, three times more than the number of reported cases in 2016 over the same period. The cases are mainly linked to an epidemic outbreak in Lorraine (60 cases). Two cases of encephalitis and 15 severe pneumopathies have been recorded since the beginning of the year.

Hungary
Between 21 February and 22 March 2017, Hungary reported 54 cases of measles. The health authorities have lifted the quarantine from the hospital in Mako, southeast Hungary, as no new cases were detected in two weeks.

Iceland
On 31 March, Iceland reported two cases in two 10-month-old twin siblings. The infants were unvaccinated. The first case was diagnosed 10 days before the second case. This is the first time in a quarter of a century that measles infection has occurred in Iceland.

Spain
An outbreak started in the first week of January in Barcelona metropolitan area, due to an imported measles case from China. As of 27 March, 44 cases have been confirmed. Most of the cases are unvaccinated or incompletely vaccinated adults. Four of the cases are children, and ten cases were hospitalised.

Sweden
Since the beginning of 2017 and as of 21 March 2017, Sweden reported 15 cases of measles, including three imported cases.

Outside the EU

Afghanistan
As of 31 March 2017, Afghanistan has reported 73 measles outbreaks for the first quarter of the year.

Australia
As of 7 April, Australia has reported 49 cases of measles in 2017, from New South Wales (23), Western Australia (12), Queensland (8), Victoria (4) and the Northern Territory (2). The median age of the cases is 18 years with a range of 0 to 47 years.

Canada
As of 9 April 2017, Canada has reported 31 cases of measles, resulting from nine separate import events.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu
Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Nova Scotia reported that due to two imported cases, 23 secondary cases have occurred in February and March.

Central African Republic
Since the beginning of 2017 and as of 4 April 2017, Central African Republic has reported over 50 cases of measles in the prefectures of Lobaye in the south, Ouaham and Ouaham Pendé in the north. Twenty cases are in serious condition.

Ethiopia
Since the beginning of 2017 and as of 2 April, Ethiopia has reported 1 100 cases of measles, of which 496 are confirmed. Measles campaign targeting around 22.5 million children have been conducted since February.

Guinea
Since the beginning of 2017 and as of 19 April, Guinea has reported 5 262 cases of measles, of which 3 906 are confirmed. Nineteen cases died. The weekly incidence of cases declined by 68% in the last three weeks. Approximately 242 cases were reported in the week ending April 14, compared to a peak with 746 cases in mid-March. Vaccination campaign in Conakry ended on 17 April 2017. Preparation for a vaccination campaign in the remaining 21 health districts is on-going.

Liberia
Since the beginning of the year and as of 16 April 2017, Liberia has reported 576 suspected cases of which 487 were tested: 45 positive, 416 negative and 26 equivocal, while 89 were compatible and epi-linked. From the negative cases, 188 samples have been tested for rubella, out of which 97 were positive. There are more suspected cases reported in Liberia in 2017 compared to 2016.

Nigeria
Since the beginning of the year and as of March 2017, Nigeria has reported 51 cases of measles. Media, quoting The Nasarawa State Government, reported that between January and the beginning of April 2017, 15 deaths due to measles, mainly children, are notified.

Pakistan
Between January and March 2017, in Pakistan four provinces have reported cases: Punjab(174), Sindh(1008)n Sindh, KPK (Khyber Pakhtunkhwa) (279) and Balochistan (94).

Somalia
Since the beginning of the year and as of 25 April, Somalia has reported almost 5 700 cases of measles. This number is higher than the number of cases reported during the same period last year.

South Sudan
Since January 2017, 560 suspect measles cases including four deaths have been reported from 18 counties. Five counties confirmed measles outbreaks since the beginning of 2017. The overall downtrend continues. A measles vaccination campaign is scheduled for 17 – 28 April 2017.

Switzerland
Since the beginning of 2017 and as of 16 April, Switzerland reported 61 cases of measles.

Syria
In March 2017, Idleb in northwest Syria reported 91 cases since the beginning of 2017.

Ukraine
On 24 April 2017, Ukraine reported 13 cases of measles hospitalised in Ivano-Frankivsk in the west of Ukraine. Twelve of the cases are children under the age of 15 years.

USA
As of 26 April 2017, Minnesota Department of Health has reported 24 confirmed cases of measles among Somali Minnesotan children in Hennepin County.

ECDC assessment

Measles outbreaks continue to occur in EU/EEA countries, and there is the risk of spread and sustained transmission in areas with susceptible populations. The national vaccination coverage remains less than 95% for the second dose of MMR in the majority of EU/EEA countries. The progress towards elimination of measles in the WHO European Region 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

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu
Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

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 the EU/EEA) were concluded to have interrupted endemic transmission for between 12 and 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 and Romania.

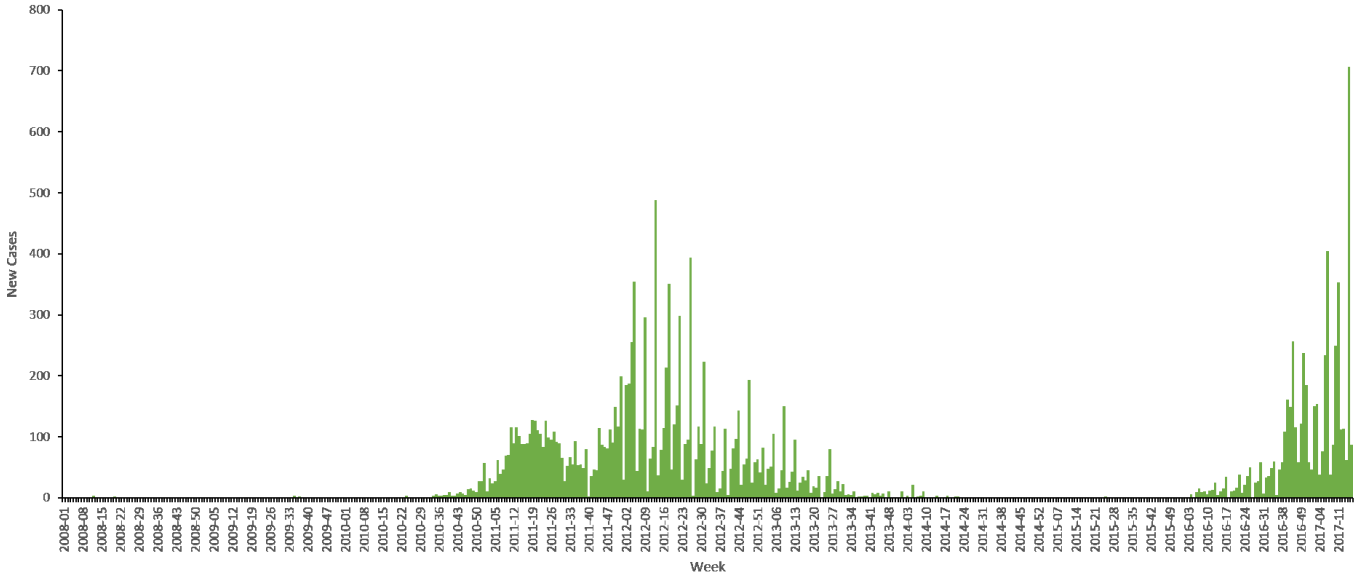
More information on strain sequences would allow further insight into the epidemiological investigation. All EU/EEA countries report measles cases on a monthly basis to ECDC and these data are published every month. Since 10 March 2017, ECDC has been reporting on measles outbreaks in Europe on a weekly basis through epidemic intelligence activities.

Actions

ECDC published a rapid risk assessment on 6 March. ECDC monitors measles transmission and outbreaks in the EU/EEA on weekly basis through enhanced surveillance and epidemic intelligence activities.

New measles cases per week of reporting, week 2008-01 to 2017-16, Romania

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



*From 2008 to 2016-39 data from TESSy, from 2016-40 onwards data from Romanian MoH

Rubella – Multistate (EU) – Monitoring European outbreaks

Opening date: 7 March 2012

Epidemiological summary

No new outbreaks have been detected in the EU since June 2015.

Web sources: ECDC measles and rubella monitoring | ECDC rubella factsheet | WHO epidemiological brief summary tables | WHO epidemiological briefs | Progress report on measles and rubella elimination | European Regional Verification Commission for Measles and Rubella Elimination (RVC) (2016)

ECDC assessment

The World Health Organization (WHO) has targeted the elimination of measles and rubella in the 53 Member States of the WHO

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

European Region. Elimination is defined as the absence of endemic cases in a defined geographical area for a period of at least 12 months, in the presence of a well-performing surveillance system. Regional elimination can be declared after 36 or more months of the absence of endemic measles or rubella in all Member States of the WHO European Region. Although progress has been made towards elimination, this goal has not yet been achieved. The fifth Regional Verification Commission meeting was held 24-26 October 2016. According to the results, 24 countries in the WHO EURO region have been judged to have eliminated rubella.

Web source: WHO-EU

Actions

ECDC closely monitors rubella transmission in Europe by analysing the cases reported to The European Surveillance System and through its epidemic intelligence activities. Twenty-four EU and two EEA countries contribute to the enhanced rubella surveillance. The purpose of the enhanced rubella surveillance is to provide regular and timely updates on the rubella situation in Europe in support of effective disease control, increased public awareness, and achieving the target of rubella and congenital rubella elimination.

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

Opening date: 12 December 2016 Latest update: 28 April 2017

Epidemiological summary

From June 2016 and as of 28 April 2017, 674 confirmed cases have been reported as associated with these outbreaks. Of the 665 cases with available information on gender, 531 (95%) are in males; of the 622 of these with available information on age, 558 (90%) are between 18 and 50 years of age. The majority of the cases with available information on sexual orientation (n=353, 83%) are in MSM.

Event 1, cluster VRD_521_2016, 336 cases are associated with this cluster, which was first reported by the UK in December 2016. Forty-three cases (20%) of those with available information on their travel history travelled abroad during the incubation period; of these, 35 travelled in different EU countries, 18 travelled to Spain.

Event 2, cluster RIVM-HAV16-090, 268 cases are associated with this cluster, which was initially reported through the Early Warning and Response System (EWRS) on 14 October 2016 by the Netherlands. Later the same event was reported through EPIS-FWD on 31 January. The first two Dutch cases reported visiting the EuroPride festival in Amsterdam between 23 July and 7 August 2016. As of 28 April 2017, 63 cases (29%) of those with available travel history travelled abroad during the incubation period; of these, 49 travelled in different EU countries, 27 travelled to Spain and five to Germany.

Event 3, cluster V16-25801, 70 cases are associated with this cluster, which was reported through EPIS-FWD on 11 January 2017 by Germany. Ten cases (20%) of those with available travel history travelled abroad during the incubation period; of these, seven travelled to different EU countries.

ECDC assessment

The European hepatitis A outbreaks mostly affecting MSM are rapidly spreading and are likely not to have reached their peak yet. The definition of confirmed cases is based on viral RNA sequencing, which is performed on a large proportion of strains and in a timely fashion only in a minority of EU countries. Spain and Italy were reported as two of the most affected countries by these outbreaks in the previous ECDC rapid risk assessment; most of the sequencing results from these countries, particularly from Spain, are still pending.
The reporting of confirmed cases provides a good indication of the outbreak dynamic. However, due to the challenges in complete and timely reporting of sequencing results, the current figures represent a substantial underestimation of the true extent of these outbreaks.

Actions

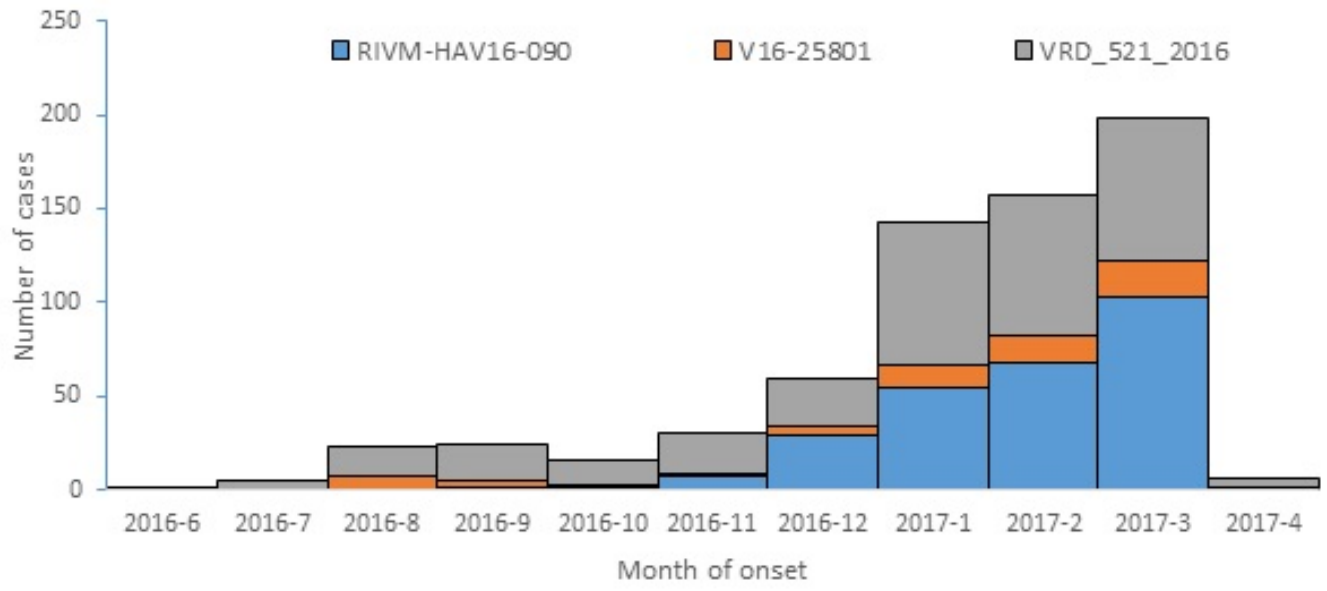
ECDC is supporting a European study to describe the full extent of the outbreak and identify possible risk factors and characteristics independently associated with the three currently ongoing clusters.
ECDC published an updated rapid risk assessment on this threat on 23 February 2017.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Number of hepatitis A confirmed cases by month and genetic cluster, EU Jun 2016-Apr 2017 (n=674, 9 cases missing month of onset, or month of sampling or month of receipt by the reference laboratory if month of onset is not available)

ECDC



Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013 Latest update: 28 April 2017

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 27 April 2017, 1 422 cases have been reported to WHO, including at least 542 deaths. The A(H7N9) outbreak shows a seasonal pattern. The first wave in spring 2013 (weeks 2013-7 to 2013-40) included 135 cases, the second wave (weeks 2013-41 to 2014-40) 320 cases, the third wave (weeks 2014-41 to 2015-40) 224 cases, and the fourth wave (weeks 2015-41 to 2016-40) 119 cases. A fifth wave started in October 2016 (week 2016-41), with 624 cases as of 27 April 2017.

The 1 422 cases were reported from Zhejiang (306), Guangdong (256), Jiangsu (243), Fujian (105), Anhui (95), Hunan (89), Shanghai (56), Jiangxi (50), Guangxi (29), Hubei (28), Beijing (22), Henan (21), Hong Kong (21), Shandong (19), Guizhou (17), Sichuan (14), Xinjiang (10), Hebei (8), Taiwan (5), Liaoning (4), Chongqing (3), Tianjin (3), Tibet (3), Jilin (3), Macau (2), Yunnan (2), Gansu (2) and three imported cases were reported in Canada (2) and Malaysia (1).

Sources: Chinese CDC | WHO | WHO FAQ page | ECDC | Hong Kong CHP

ECDC assessment

This is the fifth winter season in the northern hemisphere with human cases caused by 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 February 2017, a new A(H7N9) virus with mutations in the haemagglutinin gene – indicating high pathogenicity in poultry – was detected in three cases related to Guangdong, as well as in environmental and poultry samples. It is unclear at the moment if the newly emerged, highly pathogenic avian influenza (HPAI) virus A(H7N9) will replace the low-pathogenic virus or if both will co-circulate in the bird population. Although the genetic changes in A(H7N9) may have implications for poultry in terms of pathogenicity, surveillance and control strategies, there is no evidence to date of increased transmissibility to humans or sustainable human-to-human transmission.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

The continued transmission of A(H7N9) to humans in China poses the risk that sporadic imported cases may be detected in Europe. The following options for prevention and control of the infection should be considered:
- People travelling to China should avoid direct exposure to poultry and refrain from visiting live poultry markets or backyard farms;
- Travellers who have visited affected areas and develop respiratory symptoms and fever upon their return should consult a physician and mention their recent travel history to enable early diagnosis and treatment; and
- Travellers who have visited affected areas should avoid entering farms for the entire duration of the 10-day incubation period (and during the symptomatic period in the event that they develop symptoms) in order to prevent a possible virus introduction to poultry in the EU.

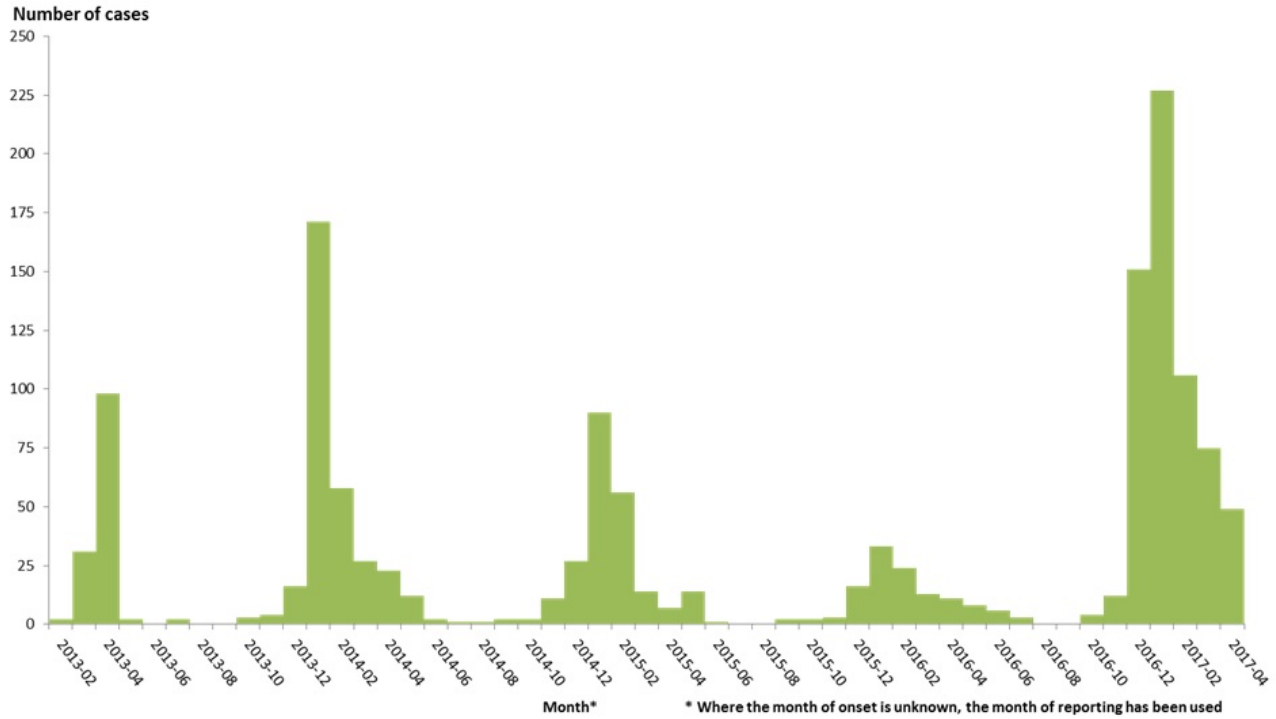
The possibility of humans infected with A(H7N9) returning to the EU/EEA cannot be excluded. However, the risk of the disease spreading within Europe via humans is still considered low, as there is no evidence of a sustained human-to-human transmission.

Actions

ECDC published a sixth update of the rapid risk assessment on 9 March, addressing the genetic evolution of influenza A(H7N9) virus in China and the implications for public health.

Distribution of confirmed cases of A(H7N9) by first available week, February 2013 to 27 April 2017 (n=1 422)

ECDC, WHO, Hong Kong

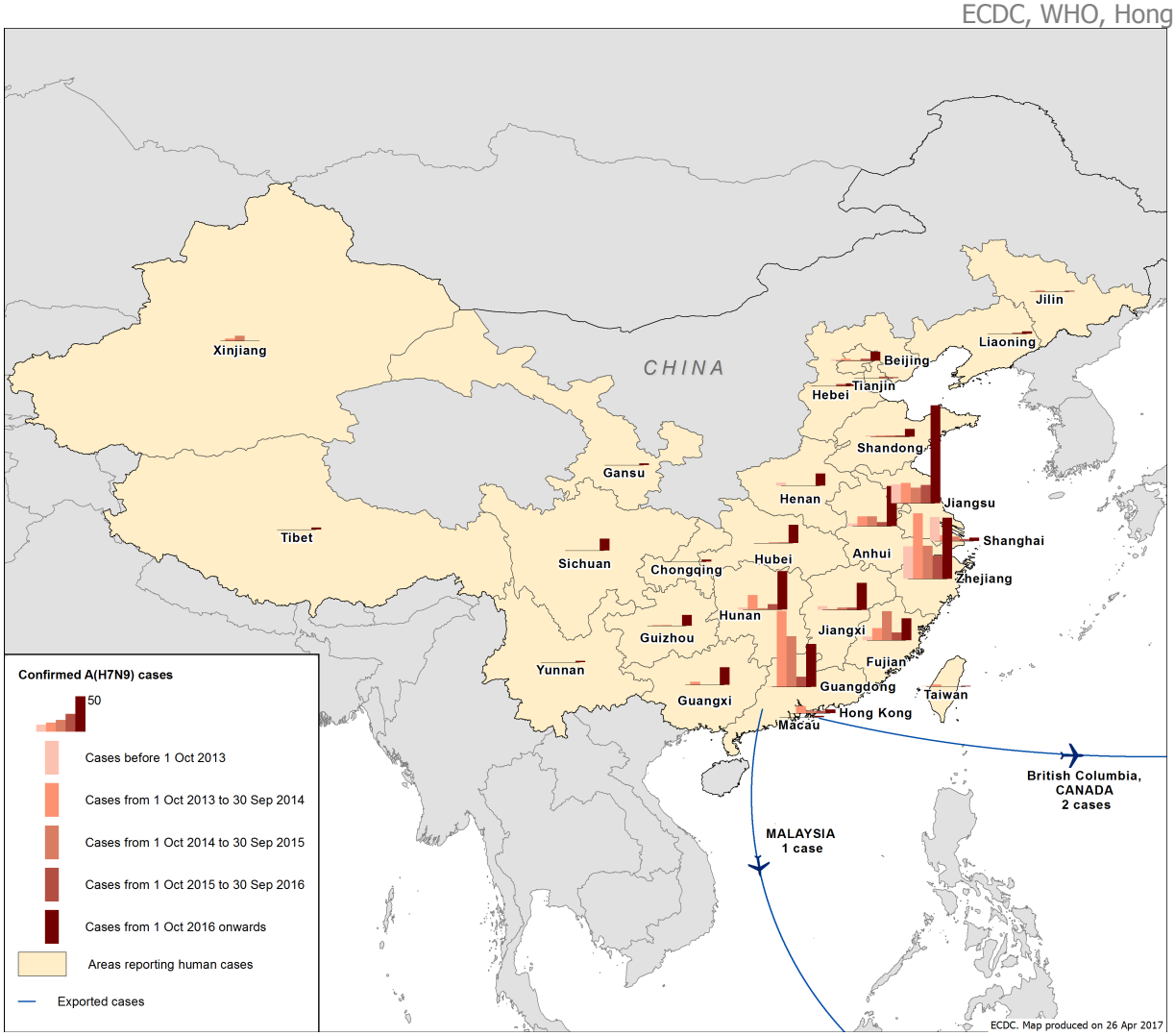


European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Distribution of confirmed cases of A(H7N9) by five periods (weeks 2013-7 to 2017-16)

ECDC, WHO, Hong Kong



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

Opening date: 10 November 2016

Epidemiological summary

As of 27 April 2017, 11 EU Member States as well as Switzerland have reported 52 TALD cases with onset since 1 October 2016 and with travel history to Dubai within two to ten days prior to illness. Cases were reported by the United Kingdom (24), the Netherlands (6), Sweden (6), Denmark (4), France (3), Germany (3), Austria (1), Belgium (1), Hungary (1), Ireland (1), Spain (1) and Switzerland (1). Forty-seven cases are associated with commercial accommodation sites and five with private accommodation sites. Nine cases spent time in another location in UAE or in a country other than their home country during their incubation period. One case was reported as a fatal case.

All cases are laboratory confirmed. Three 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 the first such identification worldwide and appears to be closely-related to type 616. UAE authorities have informed ECDC that no increase in cases of statutory notifiable pneumonia was observed in Dubai between October and

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

December 2016.

ECDC assessment

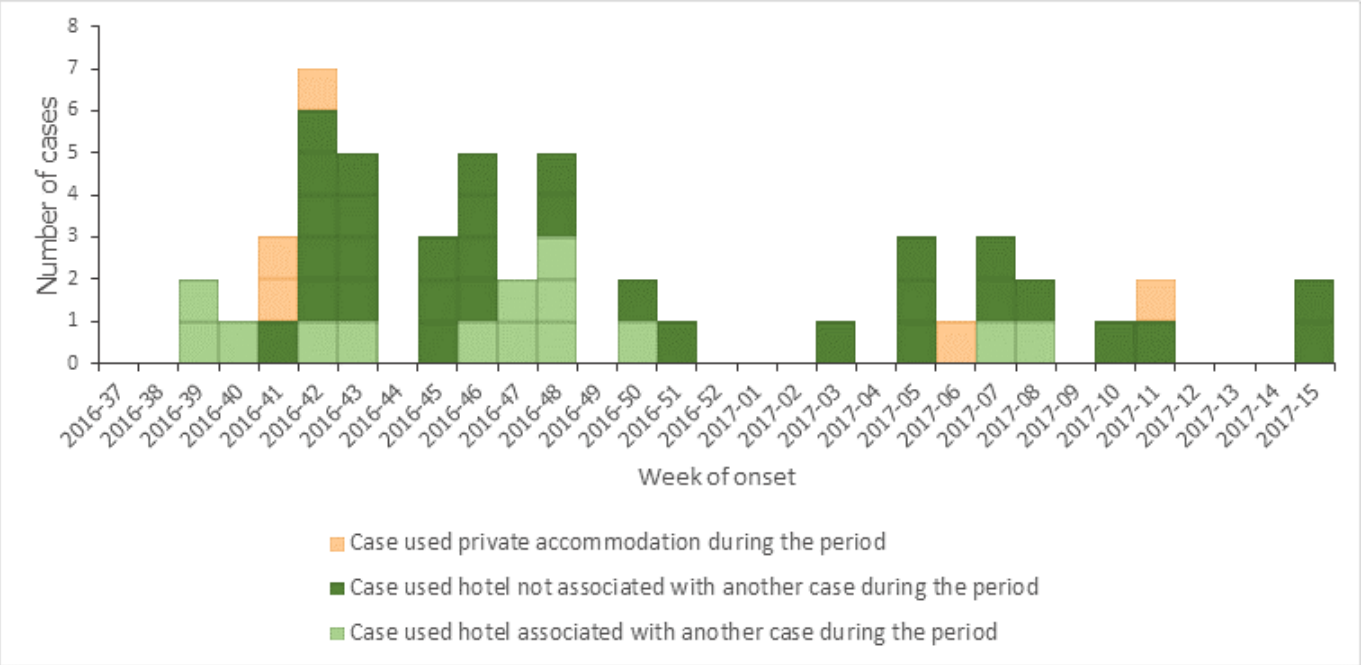
Cases continue to be reported with onset of symptoms in recent weeks, indicating that there is a persistent source of *Legionella* exposure common to travellers with travel history to Dubai. However, it cannot be ruled-out that some travellers may have acquired their infection elsewhere if their travel stay in Dubai was shorter than the range of the incubation period. The increase in cases observed between October 2016 and April 2017 is above that observed in previous years.

Actions

ECDC monitors this event through ELDSNet. ECDC is collating supplementary case questionnaires and is in contact with EU Member States, the ELDSNet network, WHO and UAE for information sharing. ECDC published a rapid risk assessment on 23 December 2016 and shared an updated rapid risk assessment with the European Commission and EU Member States on 13 January 2017. The conclusions of the rapid risk assessment remain valid. ECDC also posted an epidemiological update on 7 April.

Distribution of travel-associated Legionnaires' disease cases with history of stay in Dubai, United Arab Emirates, by week of onset from 37-2016 and 15-2017, as reported to ELDSNet by 27 April 2017 (n=52 cases)

ECDC



Detection of pathogenic bacteria in CRISPR Kit – Multistate

Opening date: 11 April 2017 Latest update: 28 April 2017

Epidemiological summary

In March 2017, Germany acknowledged the detection of pathogenic microorganisms in the DIY Bacterial Gene Engineering CRISPR Kit®, in addition to the non-pathogenic *E. coli* strain declared to be in the kit by the manufacturer. The kit is produced by a US-based company. Pathogenic microorganisms, some with an antibiotic resistance profile, were identified in the kit that is marketed as safe for home use. The kit is sold over the Internet, targeting non-professional microbiology hobbyists. The detection of the pathogenic microorganisms was made as part of the control implemented by local health and food safety authorities. WHO Health Information Management teams in HQ, EURO and PAHO are closely monitoring the event.

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

On 24 March, the Bavarian Health Authorities issued a press statement of the potential contamination through the use of these kits.

Source: media, media, Bayern Authorities, German authorities

ECDC assessment

The risk of infection by the contaminating strains in the kit is low for the users of the kit, assuming that they are healthy. The contribution of the kit to the burden of antimicrobial resistance in the EU/EEA population and environment is marginal and the risk associated with the kits is considered very low.
At this stage, it is estimated that the distribution of such contaminated kits is very limited. The assessment of the risk associated with the DIY kits should be revised should the distribution of the kit appear to be extended.

Actions

ECDC is preparing an RRA for beginning of May.

Yellow fever – South America – 2016/2017

Opening date: 16 January 2017 Latest update: 28 April 2017

Epidemiological summary

Brazil:
Between 6 January and 20 April 2017, Brazil reported 1 449 cases of yellow fever (768 suspected and 681 confirmed), including 270 deaths (35 suspected and 235 confirmed). The case-fatality rate is 18.6% overall and 34.5% among confirmed cases.

States reporting suspected and confirmed autochthonous cases:
- Minas Gerais has reported 723 cases (252 suspected and 471 confirmed), including 178 deaths (13 suspected and 165 confirmed).
- Espírito Santo has reported 474 cases (289 suspected and 185 confirmed), including 75 deaths (17 suspected and 58 confirmed).
- São Paulo has reported 122 cases (112 suspected and 10 confirmed), including seven deaths (two suspected and five confirmed).
- Rio de Janeiro has reported 33 cases (23 suspected and 10 confirmed), including three deaths (one suspected and two confirmed).
- Pará has reported 21 cases (17 suspected and four confirmed), including four confirmed deaths.
- Tocantins has reported eight cases (seven suspected and one confirmed), including one confirmed death.

States reporting suspected autochthonous cases:
Fourteen states have reported 68 suspected cases: Paraná (15, including 1 fatal), Bahia (12), Goiás (12), Rio Grande do Sul (6), Rondônia (5), Santa Catarina (5), Amapá (3), Maranhão (2), Mato Grosso (2), Mato Grosso do Sul (2), Amazonas (1), Ceará (1), Distrito Federal (1, fatal) and Paraíba (1).

Other countries in South America:
From the beginning of 2017 to 25 April, five other countries have reported suspected and/or confirmed cases of yellow fever: Peru (14), Colombia (2), Bolivia (1), Ecuador (1) and Suriname (1).

Sources: Brazil MoH | PAHO | WHO vaccination recommendations

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 obtain 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.

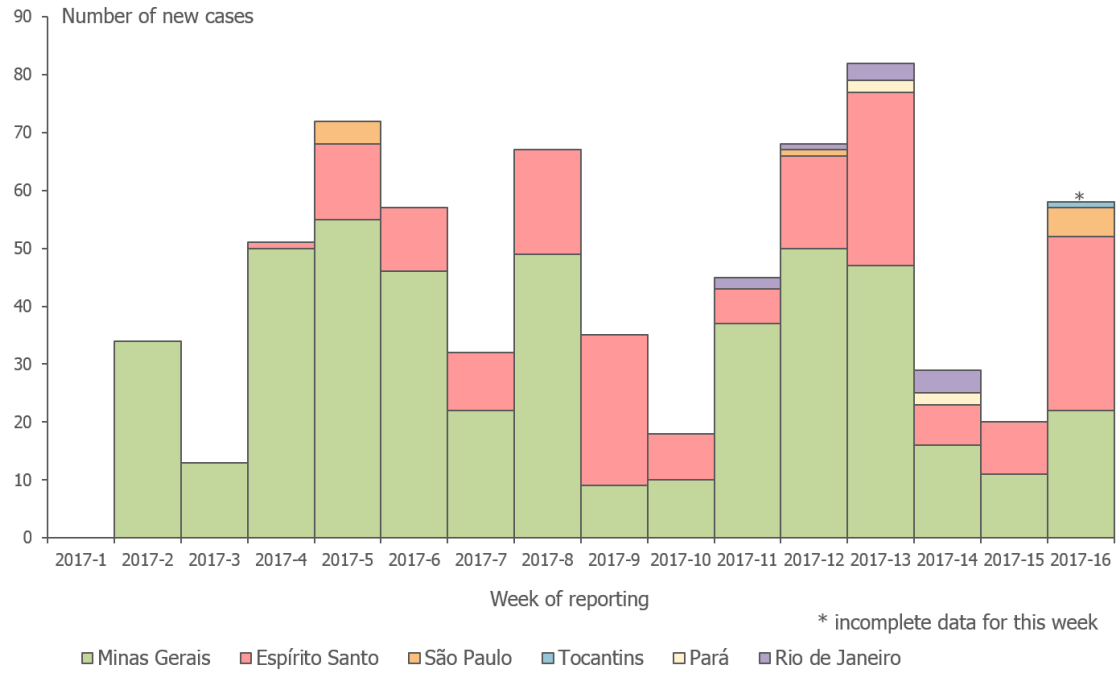
European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Actions

ECDC closely monitors this event in collaboration with the World Health Organization. ECDC published its updated rapid risk assessment on 14 April 2017. ECDC is also producing epidemiological updates and a map for travel advice.

Distribution of confirmed human cases of yellow fever in Brazil by week of reporting from 6 January to 20 April 2017



European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

Distribution of confirmed human cases of locally-acquired yellow fever in Brazil, as of 26 April 2017

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides

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

European Centre for Disease Prevention and Control (ECDC)
Postal address: ECDC 171 83 Stockholm, Sweden
Visiting address: Tomtebodavägen 11a, Solna, Sweden
www.ecdc.europa.eu

Epidemic Intelligence duty email: support@ecdc.europa.eu
Link to ECDC CDTR web page – including related PowerPoint© slides