

This weekly bulletin provides updates on threats monitored by ECDC.

NEWS

Salmonella cases no longer falling in the EU

The declining trend of salmonellosis cases in the EU has levelled off according to the annual report on zoonotic diseases published on ECDC and EFSA website.

Cases of *Salmonella* Enteritidis acquired in the EU have increased in humans by 3% since 2014 says the report, which is compiled by the European Centre for Disease Prevention and Control (ECDC) and the European Food Safety Authority (EFSA). In laying hens, the prevalence increased from 0.7% to 1.21% over the same period.

In 2016, 94 530 human cases of salmonellosis were reported in the EU. *S. Enteritidis* – the most widespread type of *Salmonella*, accounted for 59% of all salmonellosis cases originating in the EU and is mostly associated with the consumption of eggs, egg products and poultry meat.

Campylobacter and Listeria

Campylobacter, the most reported food-borne pathogen in humans, was detected in 246 307 people, an increase of 6.1% compared with 2015. Despite the high number of cases, fatalities were low (0.03%). Levels of *Campylobacter* are high in chicken meat.

Listeria infections, which are generally more severe, led to hospitalisation in 97% of reported cases. In 2016, listeriosis continued to rise, with 2 536 cases (a 9.3% increase) and 247 deaths reported. Most deaths occur in people aged over 64 (fatality rate of 18.9%). People over 84 are particularly at risk (fatality rate of 26.1%). *Listeria* seldom exceeded legal safety limits in ready-to-eat foods.

Salmonella food-borne outbreaks increasing

The 4 786 food-borne disease outbreaks reported in 2016 represent a slight increase in comparison with 2015 (4 362 outbreaks), but the figure is similar to the average number of outbreaks in the EU during 2010–2016.

Outbreaks due to *Salmonella* are on the rise, with *S. Enteritidis* causing one in six food-borne disease outbreaks in 2016.

Salmonella bacteria were the most common cause of food-borne outbreaks (22.3%), an increase of 11.5% compared to 2015. They caused the highest burden in terms of numbers of hospitalisations (1 766; 45.6% of all hospitalised cases) and of deaths (10; 50% of all deaths among outbreak cases).

Salmonella in eggs caused the highest number of outbreak cases (1 882).

Read the full report:

[The European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in 2016](#)

I. Executive summary

EU Threats

New! Salmonella Agona associated with infant formula milk - France - 2017

Opening date: 12 December 2017

Latest update: 15 December 2017

In December 2017, French authorities reported 27 *Salmonella* Agona cases among infants and children under three years of age. For most of these, consumption of infant milk formula could be confirmed. The information available as of 15 December shows that the implicated product has been distributed in 45 countries worldwide including EU/EEA countries France, Greece, the Netherlands, Romania, Slovenia and Spain. No deaths have been reported.

Influenza – Multistate (Europe) – Monitoring season 2017/2018

Opening date: 11 October 2017

Latest update: 15 December 2017

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

→Update of the week

Update of the week 2017-49 (4 to 10 December 2017)

Influenza activity across Europe remained at low levels. Of the individuals sampled, on presenting with ILI or ARI to sentinel primary healthcare sites, 11% tested positive for influenza viruses, a slightly lower proportion than the previous week (13%). Data from 16 countries or regions reporting to the EuroMOMO project indicated that all-cause excess mortality was within normal ranges for this time of year.

Non EU Threats

Diphtheria - Multistate (World) - Monitoring global outbreaks - 2017

Opening date: 10 November 2017

Latest update: 15 December 2017

Due to different crises and the interruption of vaccination programmes in several countries, an increase of the number of cases and areas affected by diphtheria in 2017 has been observed. Four different areas in the world are currently reporting the majority of diphtheria cases.

→Update of the week

Yemen

As of 4 December 2017, [MSF](#) reported 318 clinically cases of diphtheria and 28 deaths in past weeks in Yemen, mostly in children. At least one million children are currently at risk of contracting diphtheria as a result of the unavailability of vaccines and medicines in Yemen.

Bangladesh

On 13 December 2017, WHO published a [DON](#) stating 804 suspected diphtheria cases, including fifteen deaths. Diphtheria is rapidly spreading among Rohingya refugees in Cox's Bazar. This is a vulnerable population with low vaccination coverage.

Indonesia

According to [media](#) articles there is currently an outbreak of at least 663 diphtheria cases including 38 deaths in Indonesia. Vaccinations campaigns are ongoing in three of the most populated provinces of the country, including the capital territory of Jakarta.

Venezuela

According to [media](#), as of 15 November the number of diphtheria cases has reached 835 from which 146 cases are confirmed.

Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 15 December 2017

Several countries in Africa, Asia and the Americas are reporting [cholera](#) outbreaks. The current situation in Yemen, Somalia, Ethiopia, South Sudan and the Democratic Republic of the Congo is of particular concern as cholera outbreaks are occurring during a large-scale humanitarian crisis.

→Update of the week

Since the beginning of 2017, the Gulf of Aden and the Horn of Africa region have been the most affected areas.

Major increases in cholera cases are reported by Yemen with 72 450 cases and 29 deaths, DR Congo with 7 154 cases and 177 deaths, Tanzania with 960 cases and 25 deaths and Ethiopia with 873 cases and one death since the previous CDTR report on 17 November 2017.

Haiti has reported an increase by 892 cases and twelve deaths since the last CDTR report on 17 November 2017. However, the 13 059 cases reported this year remain lower than in 2016 when Haiti reported 41 421 cases during the whole year.

II. Detailed reports

New! **Salmonella Agona associated with infant formula milk - France - 2017**

Opening date: 12 December 2017

Latest update: 15 December 2017

Epidemiological summary

On 2 December, France reported 20 *Salmonella* Agona cases among infants less than six months of age after the consumption of infant milk formula.

According to media, as of 12 December, authorities report 27 cases among infants and children under three years of age. For most of these cases, consumption of infant milk formula could be confirmed. The first cases were reported in August 2017. Among 24 cases for which the information is available, 12 have been admitted to hospital. All 12 were discharged and no fatalities were reported. Consumption of four different brands of infant formula were implicated as the vehicle of infection in this outbreak.

According to French Ministry of Health, the implicated products from Lactalis company ([list of products](#)) were voluntary recalled from the market in December 2017. The products currently implicated have been distributed to 45 countries. These include six Member States: France, Greece, the Netherlands, Romania, Slovenia and Spain.

A previous outbreak of *Salmonella* Agona occurred in France in 2004 and 2005 and was associated with consumption of infant milk formula.

TESSy background

Salmonella Agona is the 10th most common *Salmonella* serotype in the EU/EEA. In 2012-2016, it was reported by 26 EU/EEA countries with 400-581 cases annually. The United Kingdom, Germany and France accounted for the highest proportion of confirmed cases (30%, 16% and 14%, respectively) in this period. Cases were most frequent among adults in age group 25-44 (23%), and children under five years of age (22%). No major differences were observed in gender distribution overall. Travel information was available for 76% of the cases and of these, 65% were reported as domestic cases.

Sources: [Media](#) | [SANTE France](#) | [Lactalis](#) | [RASFF](#)

ECDC assessment

This outbreak of *Salmonella* Agona affects primarily infants and is associated with different brands of infant milk formula produced in one factory in France. The product has been distributed to 45 countries around the world, including France, Greece, the Netherlands, Romania, Slovenia and Spain in the EU. Biochemical tests and ultimately whole genome sequencing (WGS) analysis will confirm whether cases of *Salmonella* Agona in infants have a link with the outbreak.

Actions

ECDC monitors the event in EPIS FWD and is actively engaged in communication with the possibly affected EU/EEA countries. Whole genome sequencing services are being offered to countries who do not have the capacity or possibilities for timely analysis, while the comparison of sequences is done by the Institute Pasteur in France.

Influenza – Multistate (Europe) – Monitoring season 2017/2018

Opening date: 11 October 2017

Latest update: 15 December 2017

Epidemiological summary

2017/2018 season overview

Since week 2017-40, a low number of influenza viruses have been detected in sentinel and non-sentinel specimens. A higher proportion of type B viruses compared to type A viruses have been detected from sentinel sources. Approximately equal proportions of A(H1N1)pdm09 and A(H3N2) viruses have been detected. For type B viruses from both sentinel and non-sentinel sources, B/Yamagata lineage viruses have greatly outnumbered those of the B/Victoria lineage.

While low in number, of the A(H3N2) viruses genetically characterised 61% belonged to clade 3C.2a, the vaccine virus clade as described in the [WHO recommendations for vaccine composition for the northern hemisphere 2017–18](#), and 39% to clade 3C.2a1 the viruses of which are antigenically similar to those of clade 3C.2a.

Additional information

The Norwegian Institute of Public Health has published an [early risk assessment for the influenza season 2017/2018 in Norway](#). The [US CDC](#) reports that several influenza activity indicators are higher in the United States than typically seen for this time of the year with A(H3N2) viruses dominating. A(H3N2) viruses are similar to the 2017/2018 Northern Hemisphere A(H3N2) vaccine component.

Additional information on global influenza activity is available from [WHO's biweekly global updates](#).

ECDC assessment

As is usual for this time of year, influenza activity is low in the European Region.

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 the [ECDC website](#) and on the [World Health Organization's Regional Office for Europe website](#).

Diphtheria - Multistate (World) - Monitoring global outbreaks - 2017

Opening date: 10 November 2017

Latest update: 15 December 2017

Epidemiological summary

Europe:

Latvia

According to the European Surveillance System, Latvia reported two diphtheria cases during 2017.

Ireland

According to a [media report](#) released on 20 June 2017, Ireland reported one diphtheria case during 2017.

The United Kingdom

According to the European Surveillance System, the United Kingdom reported one diphtheria cases during 2017

ASIA:

Yemen

As of 4 December 2017, [MSF](#) reported 318 suspected cases of diphtheria and 28 deaths in the past weeks in Yemen, mostly in children. Deaths have been reported in fifteen of the 20 governorates of Yemen. Diphtheria is endemic in Yemen. The last recorded cases were in 2013. According to [UNICEF](#), the percentage of surviving infants who received the 1st and 3rd dose of diphtheria and tetanus toxoid with pertussis containing vaccine (DTP1/DTP3) in the last ten years was between 81% and 88%.

Bangladesh

On 13 December 2017, WHO published a [DON](#) stating 804 suspected diphtheria cases, including fifteen deaths. Diphtheria is rapidly spreading among Rohingya refugees in Cox's Bazar. This is a vulnerable population with low vaccination coverage. Since August 2017 more than 624 000 people have fled violence from the neighbouring Myanmar, gathering in densely populated temporary settlements with poor access to clean water, sanitation and health services. To date, no cases of diphtheria have been reported from local communities. WHO considers the risk at the national level to be moderate and risk of spreading to local population cannot be discarded.

Indonesia

According to [media](#) articles there is currently an outbreak of at least 663 diphtheria cases including 38 deaths in Indonesia. Vaccination campaigns are ongoing in three of the most populated provinces of the country, including the capital territory of Jakarta. According to [WHO](#), in 2016 the coverage rate for the third dose of diphtheria toxoid, tetanus toxoid and pertussis vaccine was 79% among the population. Other neighbouring countries are also reporting diphtheria cases during 2017, such as [Malaysia](#) with 18 cases and 3 deaths, [Singapore](#) with one case or [the Philippines](#) with three cases.

Americas:

In 2017, from epidemiological week 1 to 45, four countries in the Americas have reported suspected or confirmed diphtheria cases: Brazil (39 of which five confirmed), the Dominican Republic (three confirmed), Haiti (120 of which 51 confirmed), and Venezuela where [media](#) is reporting 835 cases, including 146 confirmed cases. This is an increase compared with 2016, when three countries in the Americas reported 78 confirmed diphtheria cases: Haiti (56 cases), Venezuela (20 cases) and the Dominican Republic (two cases). According to the report provided by Venezuelan authorities, from January to September 2017, vaccination

coverage in children under one year of age reached 68%, and 42% of children aged five had the booster. The Venezuela Ministry of Health has intensified vaccination against diphtheria as part of the national plan. Nine million doses of the vaccine are available for this activity. In addition, national and local authorities are strengthening epidemiological surveillance, active search and investigation of cases and contact tracing. On 15 November 2017, the Venezuelan [media](#) reports that vaccination campaigns, targeting children and adults, is on-going.

Sources: [WHO PAHO](#), TESSy

ECDC assessment

Poor sanitation, overcrowding, unsanitary living condition, low vaccination coverage, immunity gaps in adult are factors that favour the transmission of the disease. Also ongoing crises can disrupt health systems and interrupt treatment and vaccination activities.

The risk of spread to Europe is low, however Europeans living or travelling to the areas should consult their healthcare provider regarding their vaccination status. Travellers, international school-children and students, and those residing in affected countries should check whether they have completed primary vaccination series and booster doses against diphtheria before departure. Upon return from the affected countries to the EU, travellers with symptoms, such as tonsillitis, pharyngitis, erosanguinous nasal discharge, or skin lesions should seek healthcare for diphtheria testing. If tested positive, treatment should be in place including rapid investigation and management of close contacts.

Asymptomatic carriage of *C. diphtheriae* in unvaccinated and vaccinated healthy individuals is documented and will remain an important determinant of the risk of exposure to diphtheria. Those who are unimmunised are at risk regardless of setting. All EU/EEA Member States included diphtheria as part of their national immunisation schedule. According to the [WHO position paper](#) published in August 2017, all children should be immunised against diphtheria. According to [WHO](#), diphtheria toxoid and diphtheria containing vaccines are safe and effective. It is the responsibility of Member States to achieve timely vaccination with a complete primary vaccination series and booster doses.

Actions

ECDC has prepared a [factsheet on diphtheria](#). ECDC monitors this threat through epidemic intelligence and will not report it again unless relevant epidemiological updates are released.

Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 15 December 2017

Epidemiological summary

Americas

Haiti: In 2017, as of 2 December, Haiti had reported 13 059 cholera cases, including 150 deaths (CFR: 1.2%) in all ten departments. This represents an increase of 892 cases and twelve deaths since the previous update on 17 November 2017. In 2016, Haiti reported 41 421 cholera cases including 447 deaths (CFR:1%).

Dominican Republic: In week 46, the Dominican Republic reported two cholera cases. As of 18 November 2017, the Dominican Republic reports 110 cholera cases and four deaths in 2017.

Africa

Nigeria: In 2017, as of 3 November, Nigeria had reported 9 013 suspected cholera cases, including 145 deaths (CFR: 1.6%). This outbreak is affecting the Kwara, Kebbi, Kano, Kaduna, Oyo, Zamfara, Lagos and Borno states.

DR Congo: In 2017, as of 26 November 2017, DR Congo had reported 49 488 suspected cholera cases, including 1 015 deaths (CFR: 2.1%). This represents an increase of 7 154 cases and 177 deaths since the previous CDTR report on 17 November 2017. In the recent weeks the majority of cases were reported in Kasai region, and there is an increase in the number of suspected cases from Ituri, Tanganyika and Upper Lomami.

Kenya: In 2017, as of 4 November, Kenya had reported 4 079 cases, including 76 deaths (CFR 1.9%). Seven counties are reporting active outbreaks: Nairobi, Kwale, Garissa, Embu, Kirinyaga, Wajir and Mombasa This represents an increase of 561 cases and ten deaths since the previous CDTR report on 17 November 2017.

South Sudan: Since the beginning of the outbreak in June 2016 and as of 1 December 2017, South Sudan has reported 21 556 suspected cases, including 462 deaths (CFR: 2.1%). Of these, 1 585 cases were confirmed. This represents an increase of 459

cases and 44 deaths since the previous CDTR report on 17 November 2017. Cholera transmission has continued to decline nationally and now remains in only two counties (Juba and Budi).

Ethiopia: In 2017, as of 19 November, Ethiopia has reported 48 584 acute watery diarrhoea (AWD) cases, including 878 deaths (CFR: 1.8%). This represents an increase of 873 cases and one death since the previous update on 17 November 2017. The number of new cases has decreased compared to the previous month. Nine regions have been affected by this outbreak.

Chad: Since the beginning of the outbreak on 14 August 2017 and as of 12 November 2017, Chad has reported 1 225 cholera suspected cholera cases, including 79 deaths (CFR: 6.5%). This represents an increase of 330 cases and fourteen deaths since the previous update on 17 November 2017. The case incidence has been decreasing since week 42.

Uganda: In 2017, as of 29 November, Uganda had reported 225 cases including four deaths (CFR:1.8%) in Kasese district. This represents an increase of 57 cases and one death since the previous update on 15 November 2017. The number on sub-counties affected by this outbreak has continued to rise and has now reached twelve sub-counties.

Zambia: Since 4 October 2017 and as of 7 December 2017, Zambia has been reporting an outbreak of 547 cholera cases including fifteen deaths (CFR:2.7%). Of these, 238 cases are confirmed. The outbreak is no longer localised in the peri-urban township on the western side of Lusaka City, but has spread to the eastern side.

Tanzania: In 2017, as of 3 December, Tanzania had reported 4 308 cholera cases including 77 deaths (CFR: 1.8%). This represents an increase by 960 cases and 25 deaths since the previous update on 17 November 2017.

Mozambique: In 2017, as of 7 December, WHO is reporting a cholera outbreak in Mozambique with 1 085 cases and one death (CFR: 0.1%). According to WHO, the outbreak is confined to the Memba, Erati and Nacorora districts.

Asia

Yemen: Since the beginning of the outbreak in April 2017 and as of 13 December 2017, Yemen has reported 986 191 suspected cholera cases and 2 225 deaths (CFR: 0.2%). This represents an increase of 72 450 cases and 29 deaths since the previous update on 17 November 2017. Some of the most affected governorates are Amanat Al Asima, Al Hudaydah, Hajjah, Amran and Dhamar.

ECDC assessment

There has been an unusual increase in the number of cases of cholera in the Horn of Africa and the Gulf of Aden in recent years. Despite the large number of travellers from the EU/EEA who visit countries in the Horn of Africa and the Gulf of Aden every year, particularly Ethiopia, Kenya and Tanzania, only very few cases are reported among returning EU/EEA travellers. The risk of cholera infection in travellers visiting these countries remains low, even though the likelihood of sporadic importation of cases may increase in the EU/EEA.

According to the World Health Organization, vaccination should be considered for travellers at higher risk, such as emergency/relief workers who are likely to be directly exposed. Vaccination is generally not recommended for other travellers.

Travellers to cholera-endemic areas should seek advice from travel health clinics to assess their personal risk and apply precautionary sanitary and hygiene measures to prevent infection. These can include drinking bottled water or water treated with chlorine, carefully washing fruit and vegetables with bottled or chlorinated water before consumption, regularly washing their hands with soap, eating thoroughly cooked food, and avoiding consumption of raw seafood products.

Actions

ECDC continues to monitor cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology and to facilitate the proper updates to public health authorities. Reports are published on a monthly basis.

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