COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 13, 25-31 March 2018

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Borna Disease Virus 1 – Germany - 2018

Opening date: 13 March 2018 Latest update: 28 March 2018

On 7 March 2018, Germany reported four human cases of acute encephalitis or encephalopathy associated with infection with Borna Disease Virus 1 (BoDV-1) through the Early Warning and Response System (EWRS).

Three of the cases relate to a cluster of solid organ recipients from a single donor from southern Germany, and two of the recipients died. One additional isolated case of encephalitis due to BoDV-1, who also died, was found in southern Germany. Apart from the fact that these three cases received organs from one single donor, no other common risk factors were identified.
No epidemiological link could be identified between the isolated case and the transplantation cluster.

The bicoloured white-toothed shrew (*Crocidura leucodon*) has been proposed as the animal reservoir of BoDV-1. The routes of transmission from the animal reservoir to humans are unknown and the zoonotic transmission pathways should be further investigated.

This is the first time that a possible BoDV-1 transmission through organ transplantation has been reported. Although this event strongly suggests the possibility of BoDV-1 transmission through solid organ transplantation, further investigations will be necessary to understand the epidemiology of the disease, including the possibility of transmission through other substances of human origin.

➔Update of the week

ECDC published a RRA on acute encephalitis associated with infection with Borna disease virus 1, Germany.

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Listeria monocytogenes clusters - Europe - 2018

Opening date: 21 February 2018

On 3 November 2017, Finland posted an urgent inquiry on the Epidemic Intelligence Information System for food- and waterborne diseases (EPIS-FWD), describing a cluster of *L. monocytogenes* PCR serogroup IVb, ST6, confirmed by whole genome sequencing (WGS) (in-house cgMLST scheme), with 13 cases detected in different parts of Finland between January 2016 and September 2017. As of 27 March 2018, this outbreak has been associated with 33 cases identified between December 2015 and March 2018. ECDC and EFSA published a joint rapid outbreak assessment on 22 March 2018. The assessment pointed at frozen corn as the suspected vehicle of infection associated with this outbreak. Since the publication of the assessment, the United Kingdom reported one additional outbreak case.

➔Update of the week

There has been one new confirmed case reported by the UK in the last week.

Highly resistant Neisseria gonorrhoeae - UK - 2018

Opening date: 23 March 2018 Latest update: 28 March 2018

On 27 March 2018, The United Kingdom reported a case of gonorrhoea with an isolate which is resistant to ceftriaxone and has high level resistance to azithromycin. This is the first report worldwide of an isolate with this resistance pattern which makes the isolate resistant to the currently recommended dual treatment.

Dengue – France, La Réunion – 2018

Opening date: 13 March 2018 Latest update: 28 March 2018

Since the beginning of 2018, La Réunion island, a French department in the Indian Ocean, has seen a significant increase in dengue cases.

➔Update of the week

Since the beginning of 2018 and as of 27 March, there have been 588 autochthonous confirmed cases of dengue in La Réunion. Among these cases, 154 were reported between 19 and 25 March 2018.

Measles - Portugal - 2018

Opening date: 16 March 2018 Latest update: 28 March 2018

Since 9 March 2018, Portugal has been experiencing an outbreak of measles in the northern region of the country. The majority of the cases are related to the Hospital San Antonio in Porto. Among the confirmed cases the majority are healthcare professionals. Responding to the outbreak, the Portuguese authorities launched active case finding and contact tracing, and initiated a vaccination and awareness campaign among patients and healthcare professionals.

➔Update of the week

Between 9 and 27 March 2018, Portugal has reported 70 confirmed measles cases. This is an increase of four cases since the CDTR published on 23 March. Among the confirmed cases, 61 (87%) are healthcare professionals, mostly from the San Antonio hospital in Porto, Portugal.

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Non EU Threats

Listeriosis - South Africa - 2017 - 2018

Opening date: 25 January 2018 Latest update: 28 March 2018

The South African National Department of Health is investigating a large listeriosis outbreak in the country. The outbreak was detected in October 2017 when an increasing number of neonatal cases of listeriosis was observed. Retrospective epidemiological investigations established that the increase in the number of listeriosis cases have occurred since May 2017.

On 4 March 2018, the South African National Department of Health declared that the vehicle of infection and the point of contamination had been identified.

➔Update of the week

Since 1 January 2017 and as of 14 March 2018, 978 laboratory-confirmed listeria cases have been detected in South Africa. Outcome at the end of hospitalisation is known for 674/978 (69%) patients, and 183/674 (27%) patients are known to have died.

On 24 March 2018, WHO published an IHR informing that the food production facilities and three of the retailers related to this outbreak, did export their products to 15 other African countries. These countries are: Angola, Botswana, DRC, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Uganda, Zambia and Zimbabwe. All these countries have issued recalls to the implicated products.

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II. Detailed reports

Borna Disease Virus 1 – Germany - 2018

Opening date: 13 March 2018 Latest update: 28 March 2018

Epidemiological summary

On 7 March 2018, Germany reported four human cases of acute encephalitis or encephalopathy associated with infection with Borna Disease Virus 1 (BoDV-1) through the Early Warning and Response System (EWRS). BoDV-1 in humans occurs rarely.

Three of the cases relate to a cluster of solid organ recipients from a single donor from southern Germany, and two of the recipients died. One additional isolated case of encephalitis due to BoDV-1, who also died, was found in southern Germany.

The organ donor passed away for reasons that seem to be unrelated to a neurological disease. There is no evidence that the donor had any clinical manifestation of the disease. Apart from the fact that these three cases received organs from one single donor, no other common risk factors were identified. No epidemiological link could be identified between the isolated case and the transplantation cluster.

Source: RKI | ECDC
ECDC link: RRA on Acute encephalitis associated with infection with Borna disease virus 1, Germany

ECDC assessment

This is the first time that a possible BoDV-1 transmission through organ transplantation has been reported.

BoDV-1 in humans occurs rarely; however considering the severity of this disease, Member States may consider adding BoDV-1 to the list of pathogens included in the differential diagnosis of causes of human encephalitis. The fact that the virus could be transmitted through solid organ transplantation raises concerns about the possibility of transmission through other types of substances of human origin (SoHO). This should be further investigated.

Clinicians and transplantation professionals should be aware of possible BoDV-1 related encephalitis and the possibility of transmission through donated organs, especially in areas where Borna disease is endemic. Endemic areas so far have been identified in central Europe including eastern and southern Germany, the eastern part of Switzerland, Liechtenstein, the most western federal state in Austria and more recently in Upper Austria.

The bicoloured white-toothed shrew (*Crocidura leucodon*) has been proposed as the animal reservoir of BoDV-1. The routes of transmission of BoDV-1 to humans from the animal reservoir remain unknown and the zoonotic transmission pathways should be further investigated.

Actions

On 26 March, ECDC published a rapid risk assessment on RRA on Acute encephalitis associated with infection with Borna disease virus 1, Germany

Listeria monocytogenes clusters - Europe - 2018

Opening date: 21 February 2018

Epidemiological summary

On 3 November 2017, Finland posted an urgent inquiry on EPIS-FWD, describing a cluster of *L. monocytogenes* PCR serogroup IVb, ST ST6, confirmed by WGS (in-house cgMLST scheme), with 13 cases detected in different parts of Finland between January 2016 and September 2017.

As of 27 March 2018, 12 EU/EEA countries had replied to the urgent inquiry. Four countries reported cases that could be linked microbiologically to the Finnish cluster based on the WGS data using either cgMLST or SNP analysis (in-house pipelines).

As of 27 March 2018, this outbreak has been associated with 33 cases identified between December 2015 and March 2018. ECDC and EFSA published a joint rapid outbreak assessment on this event, describing the human and food investigations and pointing

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at frozen corn as the suspected vehicle of infection. Following the publication of the assessment, the United Kingdom reported a new outbreak case with sampling date at the end of February.

ECDC assessment

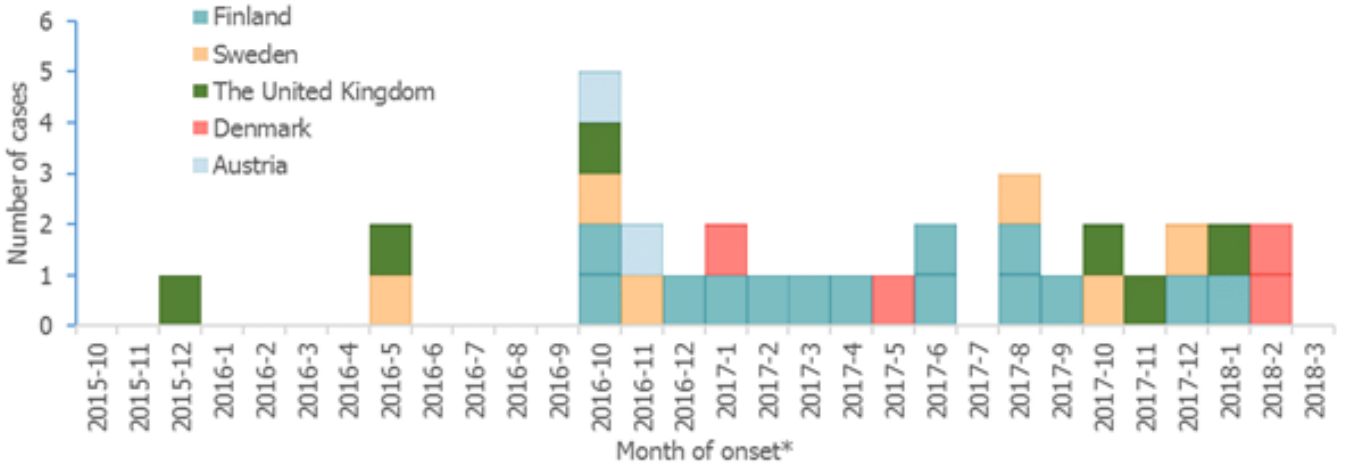
The close relation between isolates in five different countries is suggestive of a multi-country common-source outbreak. The ECDC and EFSA joint assessment provides information on the human and food investigation and on the suspected vehicle of infection of this outbreak. New cases may be reported, either because of delayed reporting and long incubation period, or until the root source of contamination has been established and control measures implemented.

Actions

ECDC and EFSA published a joint outbreak assessment to inform on the investigations in humans and food on 22 March 2018.

Listeria monocytogenes PCR serogroup IVb, MLST 6; confirmed outbreak cases by month of symptom onset, European Union, 2015–2018 (n=32)

ECDC



Highly resistant Neisseria gonorrhoeae - UK - 2018

Opening date: 23 March 2018 Latest update: 28 March 2018

Epidemiological summary

On the 27 March 2018, the United Kingdom reported a case of gonorrhoea with an isolate resistant to ceftriaxone and with high level resistance to azithromycin. These are the currently recommended treatments for gonorrhoea in most EU countries and among the last options for gonorrhoea treatment available. This is the first global report of *Neisseria gonorrhoeae* with high-level resistance to azithromycin and which is also resistant to ceftriaxone.

The index case is a heterosexual male who attended sexual health services in England in early 2018. It is considered likely that the case acquired gonorrhoea through sexual contact with a female during a visit to South-East Asia a month before. The case was initially treated with ceftriaxone (1g) and subsequently with spectinomycin. The isolate has a ceftriaxone MIC of 0.5mg/L and an azithromycin MIC of >256mg/L. On wider antimicrobial susceptibility testing, the strain was susceptible only to spectinomycin.

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At test-of cure the urine NAAT was negative but the throat swab was culture positive. Reinfection was excluded indicating that there had been treatment failure. The ertapenem MIC was low (0.032 mg/L) and the patient is being treated with this antimicrobial. A UK partner has been identified as part of contact tracing around the case and the initial testing results are negative.

Public Health England has set up an incident management team to further investigate this event, ensure contacts are traced, and contain spread. The priorities of the investigation include identifying the origins of the strain and its potential for re-emergence and/or dissemination.

ECDC assessment

This is significant event considering the lack of alternative treatments for gonorrhoea. Further spread of such strains threaten the effectiveness of the currently recommended treatment. Clinicians need to ensure that gonorrhoea cases are managed according to national and/or international guidelines, be aware of the possibility of further cases which are resistant to ceftriaxone and azithromycin, ensure that tests of cure are performed for diagnosed cases as recommended by European guidance and to submit samples for cultures and antimicrobial susceptibility testing. Sexual health services also need to ensure that partner notification is undertaken for all cases. The European Gonococcal Antimicrobial Surveillance Programme can provide expert technical and microbiological support in case of detection of significant multidrug resistant isolates where needed.

Actions

ECDC has posted the information in EPIS-STI on behalf of UK colleagues and informed the STI network. ECDC intends to share the information with the European STI clinicians' network (the International Union against STI – Europe).

Dengue – France, La Réunion – 2018

Opening date: 13 March 2018 Latest update: 28 March 2018

Epidemiological summary

Authorities have reported 588 cases on the island from the beginning of 2018 until 27 March. Among the cases, 154 were reported between 19 and 25 March 2018. Thirty-seven percent of the recent cases were reported in the Western side of the island: Saint Paul, Gare routiere et Etang, and Bois de Nefles et La Plaine municipalities. The most prevalent serotype is DENV-2.

The main vector of infection implicated in the outbreak is *Aedes albopictus.*

On 27 March2018, authorities decided to raise the level of the emergency plan ORSEC to 3. This plan includes:
- Active case finding;
- Intensification of vector control;
- Reinforcement of communication to the public and healthcare workers;
- Mobilisation of additional resources such as the firefighters.

Sources: ARS

ECDC assessment

The persistence at low level of the dengue transmission during the austral winter has been of concern and eventually led to a higher dengue virus circulation ahead of the usual dengue season transmission in La Reunion (February to June). The current outbreak is a significant event as the number of cases already exceed the yearly number of cases reported since 2010. Further transmission is expected as the weather conditions are currently favourable to vector activity and will remain favourable for few more months. Control activities are currently in place and include active reinforced vector control, enhanced surveillance, blood safety measures and social mobilisation.

For continental Europe, the introduction of the virus via viraemic travellers is possible but considering that the weather conditions are currently not favourable to mosquito activity, the risk of local transmission of the virus is considered very low. However, with the start of the spring in continental Europe, the flight passenger volume between La Réunion and France, and the demonstrated vector capacity of *Aedes albopictus*, which is largely present in southern Europe, the risk of occurrence of outbreaks of autochthonous cases will increase.

ECDC will closely monitor the situation and will reassess the situation as needed.

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Actions

ECDC reports monthly dengue outbreaks detected through epidemic intelligence in the CDTR.

Measles - Portugal - 2018

Opening date: 16 March 2018 Latest update: 28 March 2018

Epidemiological summary

On 14 March 2018, Portugal reported two measles cases in unvaccinated adults with disease onset in February and March 2018. One of the cases had travelled from France. Since 6 November 2017 France has been experiencing an outbreak of measles with 1 077 cases, including one death, reported as of 21 March 2018.

As of 27 March 2018 and since the beginning of the outbreak on 9 March 2018, Portuguese authorities reported 70 confirmed measles cases. Among the confirmed cases, all are adults and 61 (87%) are healthcare professionals, mainly from the Hospital Santo António in Porto. Almost all cases are from the northern region where the outbreak started, and one case is from the central region with a link to the northern region.

According to media, quoting the Ministry of Health, measles cases have also been reported in the hospitals of Gaia (6), São João (1), Matosinhos (1) and Braga (1).

There is active case finding, contact tracing and an ongoing awareness campaign among patients and healthcare professionals, along with a vaccination campaign.

ECDC links: ECDC Monthly measles and rubella monitoring reports | Rapid risk assessment: Risk of measles transmission in the EU/EEA

Sources: Portugal DGS | Media | SANTE PUBLIQUE FRANCE |

ECDC assessment

There are several ongoing measles outbreaks in Europe. Vaccination remains the most effective measure against infection. This outbreak underlines the need to maintain high vaccination coverage and awareness among the general population and healthcare workers.

Actions

ECDC is closely monitoring the measles situation in Portugal and is in contact with the healthcare authorities. A rapid risk assessment - Risk of measles transmission in the EU/EEA was published by ECDC on 22 March 2018. ECDC monitors measles situation in EU/EEA countries and reports on a monthly basis.

Listeriosis - South Africa - 2017 - 2018

Opening date: 25 January 2018 Latest update: 28 March 2018

Epidemiological summary

Since 1 January 2017 and as of 14 March 2018, 978 laboratory-confirmed listeriosis cases have been reported in South Africa. A total of 748 cases was reported in 2017, and 230 cases have been reported in 2018. Females account for 56% (532/948) of the cases (where gender is reported). Where age was reported (n=946), ages range from birth to 92 years (median 19 years); 396 (42%) are neonates aged ≤28 days, 66 (7%) cases are aged between one month and 14 years, 307 (33%) cases between 15 and 49 years, 87 (9%) cases between 50 and 64 years and 90 (10%) cases are aged 65 years or older.

Most cases have been reported from Gauteng Province (59%, 581/981) followed by Western Cape (12%, 118/981) and KwaZulu-Natal (7%, 70/981) provinces. Cases were diagnosed in the public (65%, 639/981) and private (35%, 342/981) healthcare

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sectors.

A total of 109 patients was interviewed about their food exposure in the month before falling ill; 93 (85%) reported eating ready-to-eat processed meat products, of which polony (Bologna sausage) was the most common, followed by 'Vienna sausages' and other 'cold meats'. After the investigation of a cluster of cases in children <5 years of age, a food manufacturer was suspected to be at the origin of the outbreak. WGS analysis of human and non-human isolates from the implicated manufacturer confirmed this hypothesis.

On 4 March 2018, the South African National Department of Health declared that the vehicle of infection and the point of contamination had been identified. A recall of the possibly contaminated products was put in place for the entire distribution networks, both domestic and international. The South African Department of Health also advised the public to avoid all processed meat products that are sold as ready-to-eat.

Additionally, on 24 March 2018, WHO published an IHR informing that the food production facilities and three of the retailers related to this outbreak, did export their products to 15 other African countries. These countries are: Angola, Botswana, DRC, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Uganda, Zambia and Zimbabwe. All these countries have issued recalls of the implicated products.

Sources: South Africa NICD | WHO AFRO outbreaks and emergencies | WHO IHR

ECDC assessment

Listeriosis can be a serious bacterial infection acquired via ingestion of contaminated food. Pregnant women, neonates, elderly and immunocompromised patients are at increased risk of severe disease and death. In pregnant women, the infection can cause premature labour and stillbirth, and neonatal meningitis in a newborn. Milder forms of the disease result in gastroenteritis, which can lead to a severe infection in those with a weakened immune system.

Prior to the current outbreak in South Africa, the first documented outbreaks occurred in 1977 (14 cases) and 2015 (seven cases); since then, only sporadic cases have been detected throughout the country. Since October 2017, an increase in the number of neonatal cases was observed. This increase and the associated deaths are of concern, as South Africa's also has a high prevalence of HIV infection. In addition, poorly regulated street food vendors are common across South Africa. Many people lack access to electricity and thus refrigeration.

Based on WGS analysis, no associated cases were reported in EU/EEA countries. The risk of spread to Europe is very low. Travellers with immune disorders, severe chronic illnesses, pregnant women and older adults should consult their doctor or seek advice from a travel clinic – particularly with regard to effective prevention measures – before travelling.

European travellers in South Africa should follow the South African Department of Health and avoid all processed meat products that are sold as ready-to-eat. In addition, they should pay attention to standard hygiene measures to reduce the risk of infection, consume only bottled drinks, mineral water and factory-produced ice cubes; avoid unpasteurised milk and milk products; ensure that meat and fish are thoroughly cooked; properly wash fruits and vegetables before consumption; and consider general hygiene conditions when consuming local products, such as freshly made fruit juices, coconut water, drinks and cocktails.

Travellers experiencing symptoms compatible to listeriosis upon return should consider consulting their healthcare provider.

Actions

ECDC is monitoring this event through EPIS FWD and epidemic intelligence.

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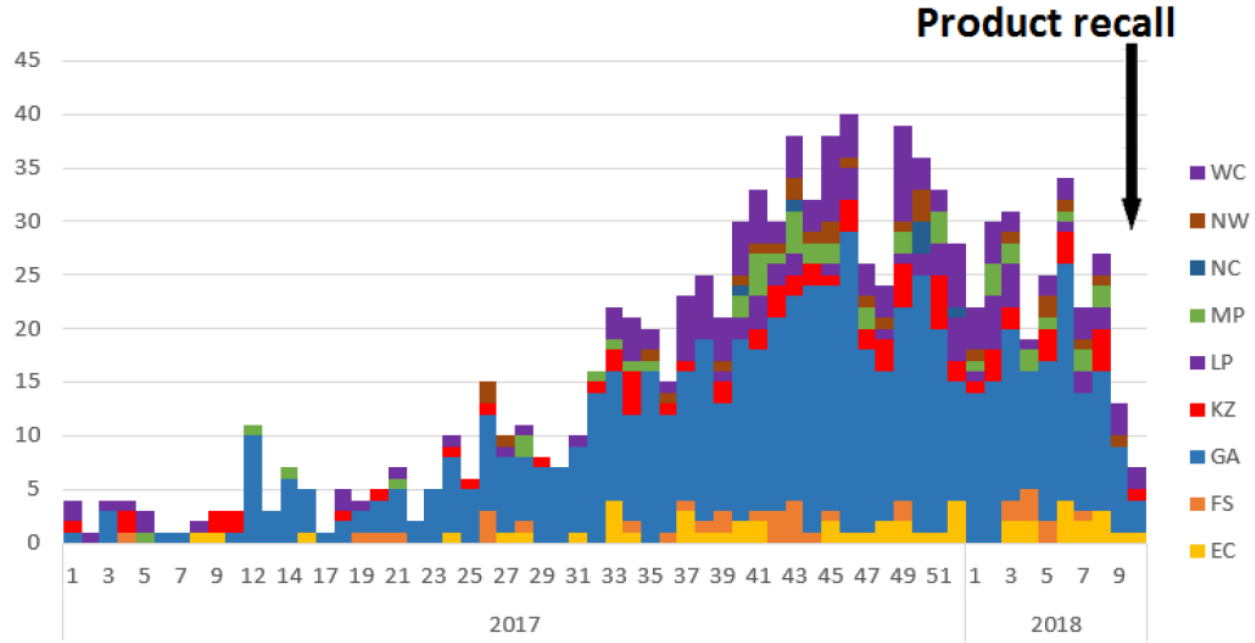
Epidemic curve of laboratory-confirmed listeriosis cases by epidemiological week and date of sample collection and province, South Africa, 01 January 2017 to 13 March 2018

South Africa Centre for Enteric Diseases



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