COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 38, 14-20 September 2014

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

West Nile virus - Multistate (Europe) - Monitoring season 2014

Opening date: 3 June 2014 Latest update: 18 September 2014

West Nile fever (WNF) is a mosquito-borne disease which causes severe neurological symptoms in a small proportion of infected people. During the June to November transmission season, ECDC monitors the situation in EU Member States and neighbouring countries in order to inform blood safety authorities of WNF-affected areas and identify significant changes in the epidemiology of the disease.

➔Update of the week

During the past week, five new cases were reported by EU Member States. Italy reported one new confirmed case from the newly affected province of Parma. Romania reported two new confirmed cases from two previously affected districts, Olt and Teleorman. Greece reported two new probable cases from the previously affected prefecture of Xanthi.

In neighbouring countries, Russia reported four new cases: one case from the previously affected Volgogradskaya oblast and three cases from the newly affected Voronezhskaya oblast. Serbia reported 13 new cases from previously affected areas: City of Belgrade (5), Sremski (2), Juzno-banatski (4) and Kolubarski (2).

Chikungunya outbreak - The Americas, 2013-2014

Opening date: 9 December 2013 Latest update: 19 September 2014

An outbreak of chikungunya virus infection has been ongoing in the Caribbean since December 2013. The outbreak has spread to North, Central and South America. There have been more than 700 000 probable and confirmed cases in the region, including 113 fatalities so far. Several EU countries are reporting imported cases from the affected areas.

➔Update of the week

Compared with last week, the number of reported cases of chikungunya infections has risen in most of the affected areas. The Brazilian Ministry of Health reports the first two autochthonous cases in Brazil in the city of Oyapock in Amapá close to the border with French Guiana. in addition the Ministry of Public Health and Social Assistance (MSPAS) in Guatemala confirmed the first eight autochthonous cases in the country.

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Non EU Threats

Outbreak of Ebola Virus Disease - West Africa - 2014

Opening date: 22 March 2014 Latest update: 18 September 2014

An outbreak of Ebola virus disease (EVD) has been ongoing in West Africa since December 2013, affecting Guinea, Liberia, Sierra Leone and Nigeria. The overall situation of the Ebola outbreak in the affected countries remains critical. The increasing number of healthcare workers that have been infected by the Ebola virus is a major cause for concern. On 8 August 2014, WHO declared the Ebola outbreak in West Africa a Public Health Emergency of International Concern (PHEIC).

➔Update of the week

Since the last CDTR, the affected countries have reported 1 066 additional cases (80 in Guinea, 674 in Liberia, 312 in Sierra Leone) and 326 additional fatalities.

Ebola Virus Disease Outbreak - the Democratic Republic of Congo - 2014

Opening date: 26 August 2014 Latest update: 18 September 2014

On 24 August 2014, an outbreak of Ebola virus disease (EVD) was declared in the Boende health zone of Equateur province in the Democratic Republic of Congo. This outbreak is the seventh outbreak of EVD occurring in the country.

➔Update of the week

No new affected areas have been reported during the past week. According to the National Coordination Committee, the overall analysis of the epidemiological situation suggests that the outbreak is under control.

Outbreak of Enterovirus D68 - USA

Opening date: 10 September 2014 Latest update: 11 September 2014

Between 19 and 23 August, Kansas city (Missouri) and Chicago (Illinois) authorities notified the Centers for Disease Control and Prevention (CDC) of 30 laboratory confirmed Enterovirus D68 (EV-D68) infections. The age of cases ranges from six weeks to 16 years. Since 19 August, 82 confirmed cases have been notified to CDC in six States in the United States. All patients presented with respiratory symptoms and hypoxemia and most were admitted to a paediatric intensive care unit. No fatalities have been reported for these cases.

➔Update of the week

Since 10 september, CDC has reported 58 additional laboratory confirmed cases and 10 new States were affected. In Canada, from 1 to 11 September 2014, laboratory tests confirmed 10 EV68 cases in Calgary, five in Edmonton and three in central and northern Alberta.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 18 September 2014

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission stops and the world is polio-free.

Polio was declared a public health emergency of international concern (PHEIC) on 5 May 2014 due to concerns regarding the increased circulation and the international spread of wild poliovirus during 2014.

➔Update of the week

During the past week, seven new wild poliovirus 1 (WPV1) have been reported from Pakistan.

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II. Detailed reports

West Nile virus - Multistate (Europe) - Monitoring season 2014

Opening date: 3 June 2014 Latest update: 18 September 2014

Epidemiological summary

As of 18 September 2014, 42 human cases of West Nile fever have been reported in the EU: Greece (15), Italy (9), Romania (15), Hungary (2) and Austria (1). Ninety-four cases have been reported in neighbouring countries since the beginning of the 2014 transmission season.

EU Member States
Italy has reported nine cases from the following provinces: Bologna (1), Parma (1), Cremona (2), Modena (2), Reggio nell'Emilia (1), Verona (1) and Pavia (1). Romania has reported 15 cases in the districts of Mures (2), Olt (3), Constanta (1), Ialomita (1), Bucuresti (1), Dambovita (1), Dolj (2), Galati (1), Giurgiu (1) and Teleorman (2). Hungary has recorded two cases in Csongrad county. Austria reported an autochthonous case of West Nile fever in Vienna. In Greece, 15 human cases have been notified since the start of the 2014 transmission season in the following prefectures: Attiki (2), Ileia (6), Rodopi (4) and Xanthi (3).

Neighbouring countries
Thirteen cases have been reported by Bosnia and Herzegovina, in Republika Srpska, in the following municipalities: Banja Luka (4), Trebinje (1), Novi Grad (1), Kljuc (1), Krupa na Uni (1), Mrkonjic Grad (1), Gornji Ribnik (1), Teslic (1), Laktasi (1) and Prijedor (1). Serbia has reported 51 cases of West Nile fever in the following regions: City of Belgrade (23), Juzno-backi district (3), Nisavski district (1), Kolubarski (4), Sremski (6), Juzno-banatski (10), Podunavski (3), Raski (1). Russia has reported 28 cases in the following oblasts: Saratovskaya (9), Samarskaya (6), Volgogradskaya (4), Astrakhanskaya (3), Belgorodskaya (1), Altayskiy Kray (1), Chelyabinskaya (1) and Voronezhskaya (3). Israel has recorded two cases of West Nile fever, one confirmed case from Netanya and one probable case from Tel Aviv, both were diagnosed in July.

Web sources: ECDC West Nile fever | ECDC West Nile fever risk assessment tool | West Nile fever maps |

ECDC assessment

West Nile fever in humans is a notifiable disease in the EU. The implementation of control measures is considered important for ensuring blood safety by the national health authorities when human cases of West Nile fever occur. According to the EU blood directive, efforts should be made to defer blood donations from affected areas with ongoing virus transmission.

Actions

Since week 23, ECDC has been producing weekly West Nile fever (WNF) risk maps during the transmission season to inform blood safety authorities regarding WNF affected areas.

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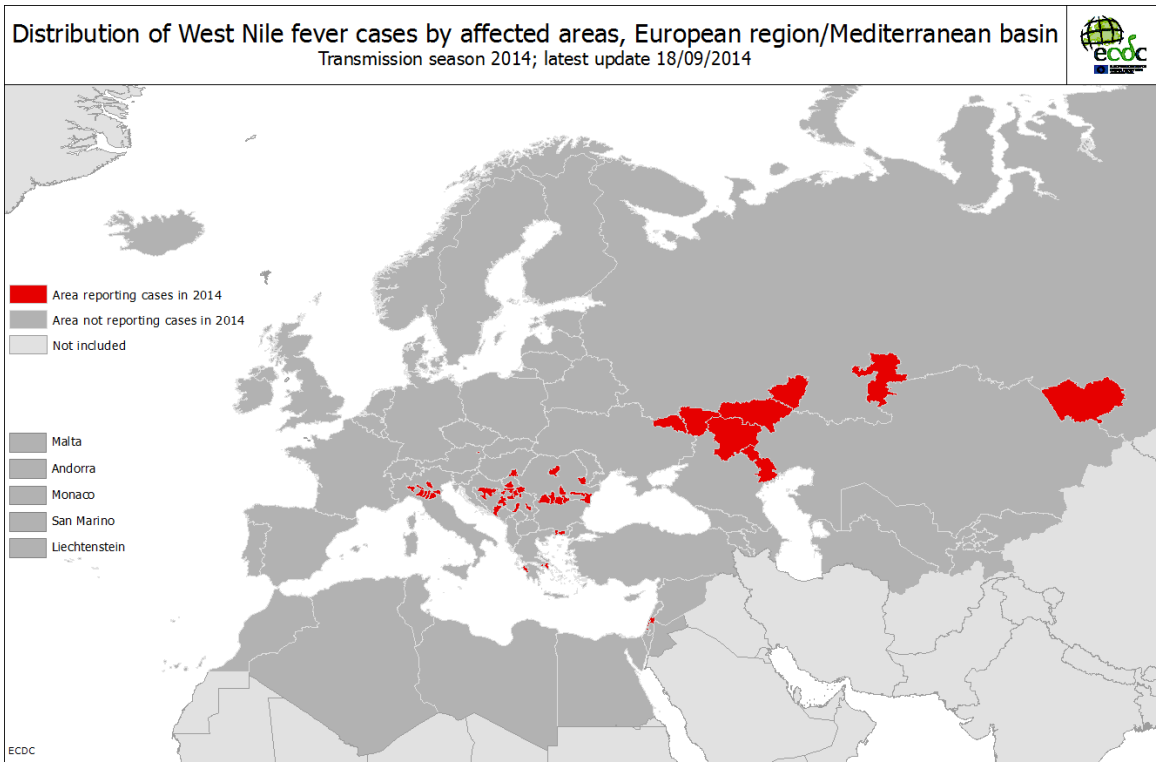
ECDC



Chikungunya outbreak - The Americas, 2013-2014

Opening date: 9 December 2013 Latest update: 19 September 2014

Epidemiological summary

As of 19 September 2014, more than 700 000 suspected and confirmed cases of chikungunya virus infection have been reported from the affected countries and territories in the Caribbean and the rest of the Americas, including 113 fatalities. For the breakdown of figures please see the latest WHO PAHO update.

In reaction to the continued spread of chikungunya virus in the Americas and the start of the period with higher dengue circulation in Central America and the Caribbean, PAHO/WHO published an epidemiological alert on 29 August, advising countries who have the vector mosquito of both viruses (*Aedes aegypti*), to increase vector density reduction efforts in addition to establishing and maintaining dengue and chikungunya case management capacity, and to implement effective public communication strategies to eliminate mosquito breeding sites.

Several EU/EFTA countries (France, Greece, Italy, the Netherlands, Spain and Switzerland) have reported imported cases of chikungunya infection in patients with travel history to the affected areas.

Web sources: PAHO update| ECDC Chikungunya | CDC Factsheet | Medisys page | CARPHA interactive chikungunya map

ECDC assessment

Epidemiological data indicate that the outbreak, which started in Saint Martin (FR), is still expanding and has reached North, Central and South America. Increasing case numbers have been observed from most of the affected areas. The vector is endemic in the region, where it also transmits dengue virus. Further spread of the outbreak is to be expected.

Vigilance is recommended for the occurrence of imported cases of chikungunya in tourists returning to the EU from the Caribbean, including awareness among clinicians, travel clinics and blood safety authorities.

Actions

ECDC updated its Rapid Risk Assessment and published it on 27 June 2014.

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Outbreak of Ebola Virus Disease - West Africa - 2014

Opening date: 22 March 2014 Latest update: 18 September 2014

Epidemiological summary

As of 14 September, 5 347 cases and 2 630 deaths have been reported to WHO by different Ministries of Health. The distribution is as follows:

- **Guinea:** 942 cases and 601 deaths;
- **Liberia:** 2 720 cases and 1 459 deaths;
- **Nigeria:** 21 cases and 8 deaths;
- **Sierra Leone:** 1 673 cases and 562 deaths;
- **Senegal:** 1 case, no death.

The average case-fatality ratio is 49%. Since the beginning of the outbreak, there have been 318 cases and 151 deaths among healthcare workers.

A French MSF medical doctor will be repatriated to France after being tested positive for EVD. The patient will be evacuated in a specially equipped aircraft. The French Ministry of Health officially indicated that infection control measures and procedures will be strictly followed to minimise the risk of transmission during transportation and hospitalisation.

There is a large number of media reports about suspected EVD cases and their systematic verification in several countries around the world, indicating that surveillance is working. To date, no cases have been found to be positive outside Guinea, Liberia, Nigeria or Sierra Leone with the exception of one case in Senegal in a Guinean national.

Web sources: WHO/AFRO outbreak news | WHO Ebola Factsheet | ECDC Ebola health topic page | ECDC Ebola and Marburg fact sheet | Risk assessment guidelines for diseases transmitted on aircraft |

ECDC assessment

This is the largest ever documented outbreak of EVD in terms of numbers and geographical spread. The outbreak has not yet reached its peak and is currently in a phase of rapid spread.

EVD is not an airborne disease and only symptomatic patients are contagious. Transmission requires direct contact with blood, secretions, organs or other bodily fluids of dead or living infected persons or animals. Therefore the risk of infection is considered very low if precautions are strictly followed. However, the increase in the number of new EVD cases in recent weeks, the urban transmission, and the fact that not all chains of transmission are known, is increasing the likelihood of visitors and travellers coming into contact with ill persons. The risk of exposure in healthcare facilities for EU residents and visitors to the affected areas is related to the implementation of effective infection transmission control measures in these settings and the nature of the care required. Recent reports of transmission to healthcare workers in different healthcare settings indicate that effective infection control measures are not being thoroughly implemented across healthcare facilities in the region.

Temporary recommendations from the Emergency Committee with regard to actions to be taken by countries can be found here.

Actions

On 4 September ECDC published an updated rapid risk assessment.
On 10 September ECDC published an EU case definition.
An epidemiological update will be published on a weekly base on the EVD ECDC page.

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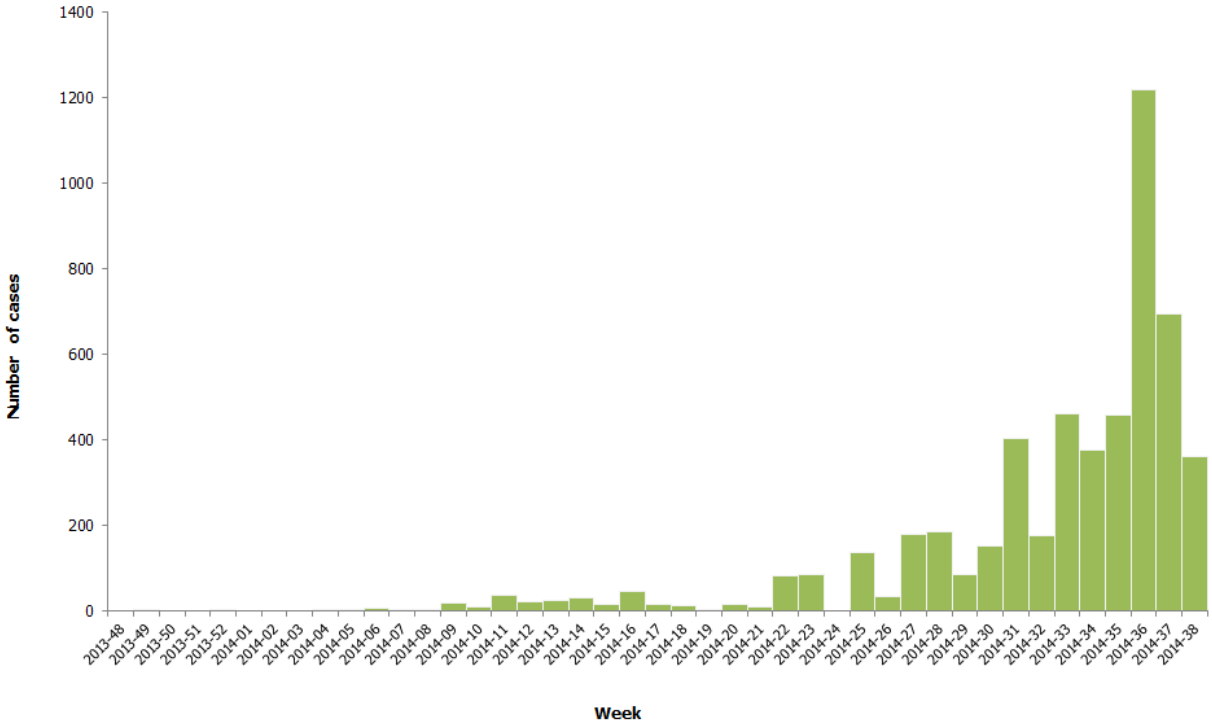
Distribution of EVD cases by week of reporting in the affected countries as of 14 September 2014*

Source: Adapted from WHO data; *data for week 38 are incomplete



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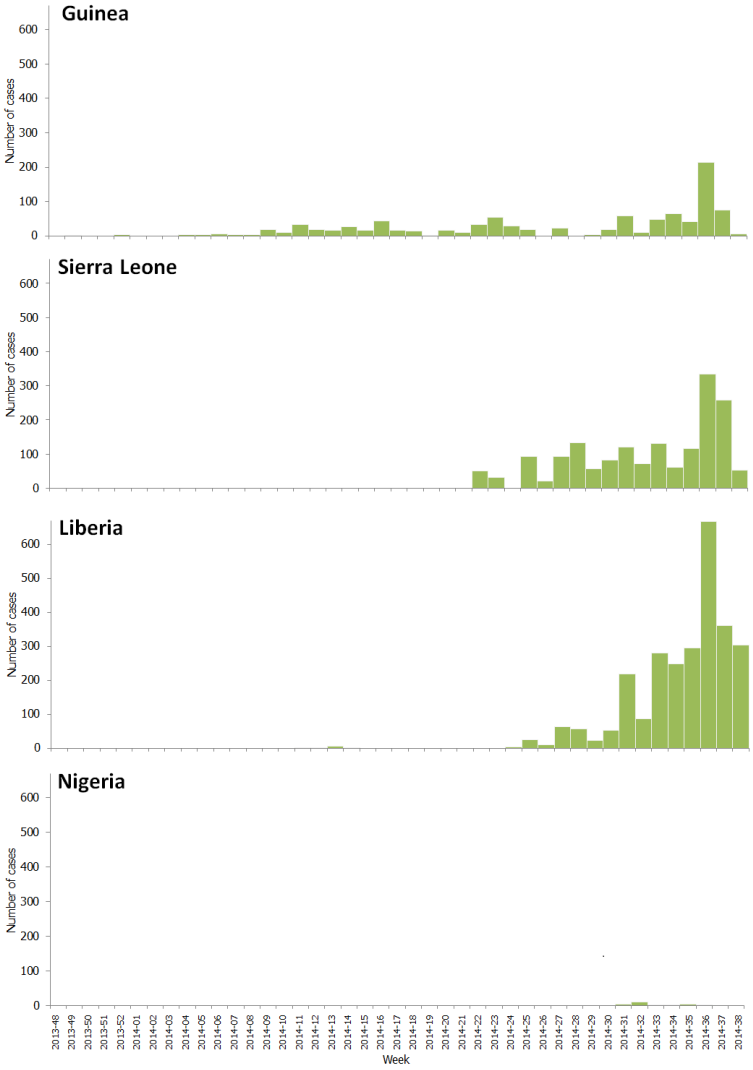
Distribution of EVD cases by week and by country, as of 14 September 2014*

Source: Adapted from WHO data; *data for week 38 are incomplete



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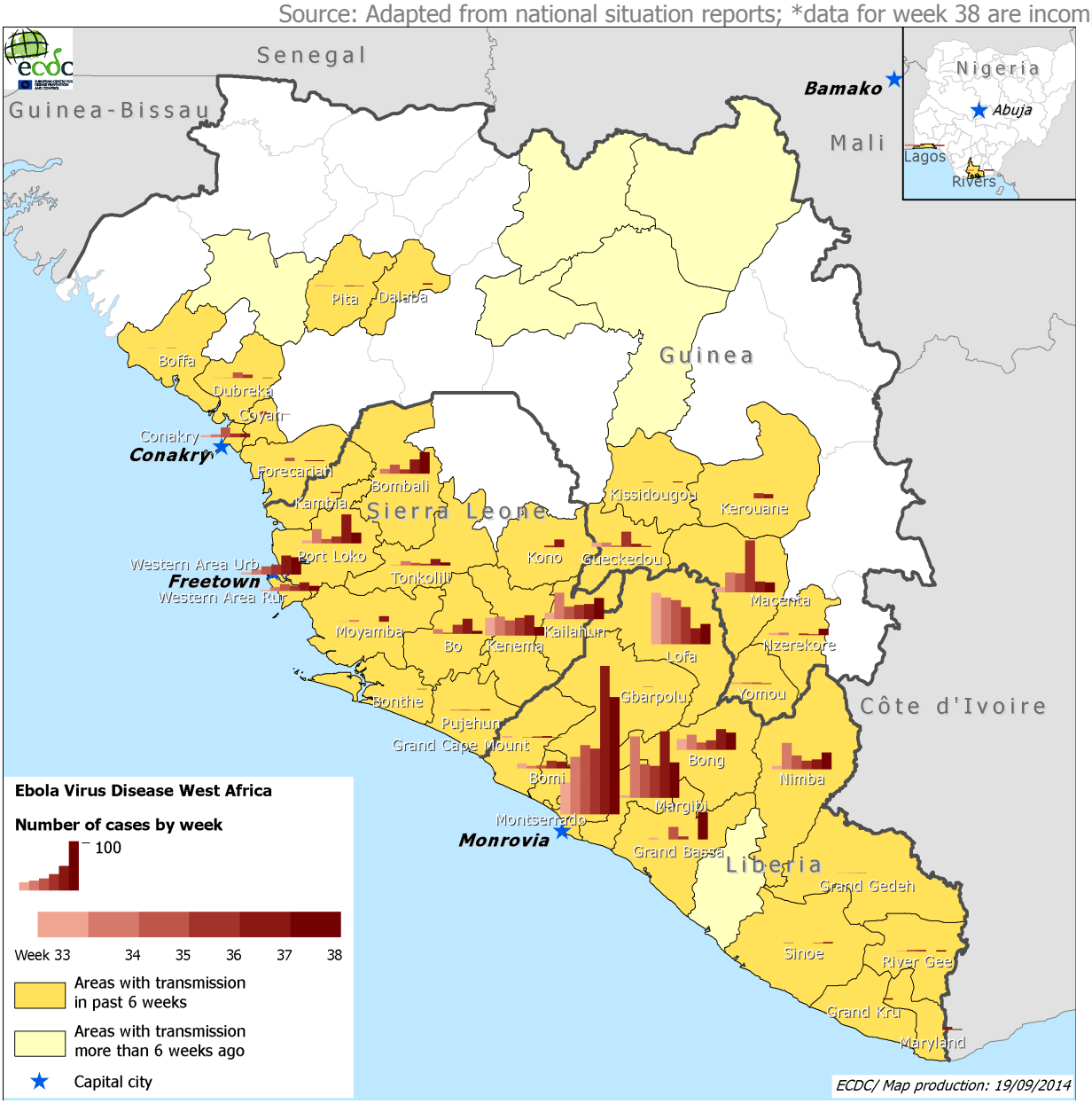
Distribution of new EVD cases by district in the affected countries, week 33 -38*, 2014

Source: Adapted from national situation reports; *data for week 38 are incomplete



Ebola Virus Disease Outbreak - the Democratic Republic of Congo - 2014

Opening date: 26 August 2014 Latest update: 18 September 2014

Epidemiological summary

On 26 August 2014, the Ministry of Health in the Democratic Republic of the Congo (DRC) notified the World Health Organization Regional Office for Africa (WHO - AFRO) of an outbreak of EVD in Equateur Province. Between 28 July and 16 September 2014, 71 cases including 40 deaths were identified. Eight health personnel have died. The index case was a pregnant woman from Ikanamongo Village who butchered a bush animal given to her by her hunter husband. She fell ill with symptoms of EVD and died on 11 August at a private clinic in Isaka Village.

A team of national and international specialists have been deployed to work with the local response teams. There are two treatment centres in the affected area run by Médecins sans Frontières(MSF): one 10 bed unit in Boende, and one 40 bed unit in Lokolia.

The species causing this outbreak is *Zaire ebolavirus*. The strain was found to be 99% homologous to Kikwit 1995 strain and therefore different form the *Zaire ebolavirus* strain circulating in West Africa.

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Web Sources: WHO AFRO | ECDC Ebola factsheet | OCHA

ECDC assessment

The outbreak in DRC is unrelated to the ongoing outbreak in West Africa.

The epidemiological features of this outbreak are consistent with previous outbreaks of EVD involving *Zaire ebolavirus*. It is likely that more cases will be identified in the coming weeks, as active case-finding and contact monitoring is in place, and given the duration of up to three weeks of the incubation period. However, control measures currently implemented with the support of international partners are expected to prevent further spread of the disease.

Actions

ECDC is monitoring this event through epidemic intelligence and has published a rapid risk assessment.

Outbreak of Enterovirus D68 - USA

Opening date: 10 September 2014 Latest update: 11 September 2014

Epidemiological summary

On 19 August, Kansas City (Missouri) authorities notified CDC of an increase in patients with severe respiratory illness. In addition, an increase of detections of rhinovirus/enterovirus by PCR in nasopharyngeal specimens was reported in August. On 23 August, Chicago (Illinois) authorities notified CDC of an increase in patients similar to those seen in Kansas City. Enterovirus D68 (EV-D68) was identified in 19 of 22 specimens from Kansas City and in 11 of 14 specimens from Chicago. Of the 19 laboratory confirmed cases from Kansas City, the ages range from six weeks to 16 years (median=4 years). Thirteen patients (68%) had a previous history of asthma or wheezing and six patients (32%) had no underlying respiratory illness. All patients had respiratory symptoms and hypoxemia and four (21%) had wheezing but only five patients (26%) were febrile. All patients were admitted to the paediatric intensive care unit and four required bilevel positive airway pressure ventilation.

Of the 11 laboratory confirmed cases from Chicago, the ages range from 20 months to 15 years (median=5 years). Eight patients (73%) had a previous history of asthma or wheezing. Notably, only two patients (18%) were febrile. Ten patients were admitted to the paediatric intensive care unit for respiratory distress. Two required mechanical ventilation and two required bilevel positive airway pressure ventilation. Since August, admissions for severe respiratory illness have continued at both facilities at rates higher than expected for this time of year. As of 3 September, Kansas City has treated 500 children, among them 15% were admitted in an intensive care unit but no fatalities are reported. However, the number of daily admissions has decreased by 50%, from 30 per day to 15 per day.

- **US :** as of 17 September, CDC is reporting 140 confirmed cases in 16 States.
- **Canada:** from 1 to 11 September 2014, Alberta health services confirmed 18 EV68 cases (10 in Calgary, five in Edmonton and three in central and northern Alberta). In addition, media quoting Windsor (Ontario) Regional Hospital reported more that more than 10 children have been treated since 11 September 2014. Among these children hospitalised, nine cases had confirmed EV68 infection. The ages of the patients ranged from 22 months to 12 years. Four of the nine are female. Health authorities are performing laboratory testing to confirm whether the strain is the same strain as circulating in the US. Further studies are on-going to determine when the virus first appeared in Canada, the diversity of circulating strains and the clinical presentation associated with the circulating virus.

Since the original isolation of EV-D68 in California in 1962, EV-D68 has been reported rarely in the United States. The National Enterovirus Surveillance System received 79 EV-D68 reports during 2009-2013. Small clusters of EV-D68 associated with respiratory illness were reported in the United States during 2009-2010 and outside the United States (Philippines, Japan and the Netherlands) between 2008 and 2010. EV-D68 causes respiratory illness and the virus can be found in respiratory secretions such as saliva, nasal mucus or sputum. The virus spreads from person to person when an infected person coughs, sneezes or touches contaminated surfaces. There are no available vaccines or specific treatments for EV-D68 and clinical care is symptomatic treatment.

Web sources: MMWR | CDC | Kansas Health institute | Illinois Department of Health | Media | CDC Q&A | Public Health Canada | Alberta health services

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ECDC assessment

EV-D68 is a potential cause of respiratory tract infection mainly among children. However, it has been rarely reported worldwide and the number of cases is likely to be underestimated in the United States and Canada due to the absence of a mandatory surveillance system. This year, the magnitude of the outbreak in United States is higher than in previous years and the identification of the virus and the risk of potential extension outside this country (including EU) remains possible.

Actions

ECDC is preparing a rapid risk assessment.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 18 September 2014

Epidemiological summary

During the past week seven new cases of WPV1 have been reported. Worldwide, 178 cases have been reported to WHO so far in 2014, compared with 264 for the same time period in 2013. In 2014, nine countries have reported cases: Pakistan (145 cases), Afghanistan (8 cases), Equatorial Guinea (5 cases), Nigeria (6 cases), Somalia (5 cases), Cameroon (5 cases), Iraq (2 cases), Syria (1 case), and Ethiopia (1 case).

After the declaration of PHEIC, WHO issued a set of Temporary Recommendations that call for the vaccination of all residents in and long-term visitors to countries with polio transmission prior to international travel.

Web sources: Polio Eradication: weekly update | MedISys Poliomyelitis | ECDC Poliomyelitis factsheet |Temporary Recommendations to Reduce International Spread of Poliovirus

ECDC assessment

Europe is polio-free. The last polio cases within the current EU borders were reported from Bulgaria in 2001. The latest outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

The confirmed circulation of WPV in several countries and the documented exportation of WPV to other countries support the fact that there is a potential risk for WPV being re-introduced into the EU/EEA. The highest risk of large poliomyelitis outbreaks occurs in areas with clusters of unvaccinated populations, people living in poor sanitary conditions, or a combination of the two.

References: ECDC latest RRA | Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA | Wild-type poliovirus 1 transmission in Israel - what is the risk to the EU/EEA? | WHO statement on the meeting of the International Health Regulations Emergency Committee concerning the international spread of wild poliovirus, 5 May 2014

Actions

ECDC follows reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being re-introduced into the EU.

Following the declaration of polio as a PHEIC, ECDC updated its risk assessment. ECDC has also prepared a background document of travel recommendations for the EU.

On 4 September 2014 ECDC published a news item regarding the WHO IHR Emergency Committee decision to add Equatorial Guinea as a wild poliovirus exporting country and the renewal of the WHO PHEIC recommendations.

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