COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 1, 28 December-3 January 2015

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Influenza – Multistate (Europe) – Monitoring 2014–2015 season

Opening date: 9 October 2014 Latest update: 19 December 2014

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter season and publishes the results on its website in the weekly Flu News Europe.

➔Update of the week

In week 52/2014, the intensity of influenza activity remained low in the majority of the reporting countries in Europe but the number of countries with increased activity continued to rise compared to previous weeks.

The level of respiratory disease activity was increasing in 3 of the 29 reporting countries, while the proportion of influenza virus-positive sentinel specimens increased to 13%, from 9% in the previous week.

The predominant influenza virus was type A, with A(H3N2) predominating in primary care, and other sources, and among laboratory-confirmed hospitalised cases.

Non EU Threats

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 18 December 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. On 14 November, the Temporary Recommendations in relation to PHEIC, were extended for a further three months.

➔Update of the week

There is no WHO update available for this week.

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

Opening date: 24 September 2012 Latest update: 1 January 2015

Since April 2012, 962 cases of MERS-CoV have been reported by local health authorities worldwide, including 391 deaths. To date, all cases have either occurred in the Middle East, have direct links to a primary case infected in the Middle East, or have returned from this area. The source of the virus remains unknown, but the pattern of transmission and virological studies points towards dromedary camels in the Middle East being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

➔Update of the week

Since the last CDTR Saudi Arabia reported three new cases of MERS-CoV infection, two of the cases were reported on 26 December(a 31-year-old female from Riyadh and a 70-year-old male from Quriat) and one case on 30 December (an 84-year-old male from Najran, who had contact with animals).

On 25 December the health authorities in Jordan reported a case of MERS-CoV. This is the first case reported in Jordan since June 2014.

An article entitled *Human-Dromedary Camel Interactions and the Risk of Acquiring Zoonotic Middle East Respiratory Syndrome Coronavirus Infection* was published in this week's issue of the journal *Zoonoses and Public Health.*

Ebola Virus Disease Epidemic - West Africa - 2014

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

An epidemic of Ebola virus disease (EVD) has been ongoing in West Africa since December 2013, mainly affecting Guinea, Liberia and Sierra Leone. The situation in the affected countries remains serious. On 8 August 2014, WHO declared the Ebola epidemic in West Africa a Public Health Emergency of International Concern (PHEIC).

➔Update of the week

Since the last CDTR on 26 December, WHO has reported 709 additional cases in the affected countries and 317 additional deaths.

As of 28 December, WHO reports 20 206 confirmed, probable, and suspected cases of Ebola virus disease, with 7905 deaths, in four affected countries (Guinea, Liberia, Mali, and Sierra Leone) and four previously affected countries (Nigeria, Senegal, Spain and the United States of America).

On 29 December, Scotland reported a confirmed case of EVD in a healthcare worker who had returned from volunteering at an Ebola treatment centre in Sierra Leone. This is the first imported case of EVD to the UK that is not a medical evacuation.

Influenza A(H5N1) - Multistate (world) - Monitoring human cases

Opening date: 15 June 2005 Latest update: 1 January 2015

The influenza A(H5N1) virus, commonly known as bird flu, is fatal in about 60% of human infections. Sporadic cases continue to be reported, usually after contact with sick or dead poultry from certain Asian and African countries. No human cases have been reported from Europe.

➔Update of the week

Since the last CDTR update on 8 December 2014, there have been 17 additional cases of A(H5N1) in Egypt.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 1 January 2015

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, 470 cases have been reported including 182 deaths. No autochthonous cases have been reported from outside of China. Most cases have been unlinked, and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak. Sustained person-to-person transmission has not been documented and transmission peaked during the winter of 2013-2014. The reason for this pattern is not obvious.

➔Update of the week

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Since the last update on 11 December 2014, WHO reported 11 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus, including five deaths, in China from previously affected areas: Jiangsu Province (1), Xinjiang Uyghur Autonomous Region (4), Zhejiang Province (2), Guangdong Province (2), Shanghai City (1) and Fujian Province (1). All cases but one had known exposure to poultry prior to falling ill.

In addition, The Department of Health in Hong Kong reported on 28 December the first confirmed human case of avian influenza A(H7N9) in Hong Kong this winter.

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II. Detailed reports

Influenza – Multistate (Europe) – Monitoring 2014–2015 season

Opening date: 9 October 2014 Latest update: 19 December 2014

Epidemiological summary

Influenza A(H3N2) have been the predominant viruses detected across all surveillance systems. While there have been difficulties in antigenically characterising A(H3N2) viruses detected within Europe, the majority of the A(H3N2) viruses genetically characterised, as in the United States of America, have fallen in genetic subgroups (3C.2a and 3C.3a) containing viruses that have drifted antigenically compared to the virus used in the 2014-2015 vaccine. Although this may compromise the effectiveness of the A(H3N2) component of the vaccine, it is still important that people be vaccinated, particularly those in groups at risk of developing severe symptoms after influenza infection; see the WHO/Europe website and ECDC rapid risk assessment on drifted A (H3N2) viruses. The situation will be monitored carefully, and treatment guidelines must be disseminated to clinicians, including on use of antivirals.

The circulating influenza A(H3N2), A(H1N1)pdm09 and B viruses remain susceptible to the antivirals oseltamivir and zanamivir currently licensed in Europe.

No indication of increased mortality has been reported in the European project for monitoring excess mortality for public health action (EuroMOMO: http://www.euromomo.eu).

Web sources: Flu News Europe | ECDC Influenza |

ECDC assessment

The influenza season in Europe appears to be starting as the proportion of influenza virus-positive sentinel specimens has increased above the threshold of 10%, despite the majority of countries still reporting low intensities of influenza activity.

Actions

ECDC and WHO produce the Flu News Europe bulletin weekly.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

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

Epidemiological summary

Worldwide in 2014, 342 cases have been reported to WHO as of 24 December, compared with 416 for the same time period in 2013. In 2014, nine countries reported cases: Pakistan (291 cases), Afghanistan (26 cases), Nigeria (6 cases), Equatorial Guinea (5 cases), Somalia (5 cases), Cameroon (5 cases), Iraq (2 cases), Syria (1 case), and Ethiopia (1 case).

After the declaration of a 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 to the EU/EEA. The highest risk of large poliomyelitis outbreaks occurs in areas with clusters of unvaccinated populations and in people living in poor sanitary conditions, or a combination of the two.

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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 | WHO statement on the third meeting of the International Health Regulations Emergency Committee regarding the international spread of wild poliovirus, 14 November 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 to the EU.

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

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

Opening date: 24 September 2012 Latest update: 1 January 2015

Epidemiological summary

Since April 2012 and as of 1 January 2015, 962 cases of MERS-CoV have been reported by local health authorities worldwide, including 391 deaths. The distribution is as follows:

Confirmed cases and deaths by region:
Middle East
Saudi Arabia: 825 cases/356 deaths
United Arab Emirates: 73 cases/9 deaths
Qatar: 9 cases/4 deaths
Jordan: 19 cases/6 deaths
Oman: 2 cases/2 deaths
Kuwait: 3 cases/1 death
Egypt: 1 case/0 deaths
Yemen: 1 case/1 death
Lebanon: 1 case/0 deaths
Iran: 5 cases/2 deaths

Europe
Turkey: 1 case/1 death
UK: 4 cases/3 deaths
Germany: 2 cases/1 death
France: 2 cases/1 death
Italy: 1 case/0 deaths
Greece: 1 case/1 death
Netherlands: 2 cases/0 deaths
Austria: 1 case/0 deaths

Africa
Tunisia: 3 cases/1 death
Algeria: 2 cases/1 death

Asia
Malaysia: 1 case/1 death
Philippines: 1 case/0 deaths

Americas
United States of America: 2 cases/0 deaths

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Web sources: ECDC's latest rapid risk assessment | ECDC novel coronavirus webpage | WHO | WHO MERS updates | WHO travel health update | WHO Euro MERS updates | CDC MERS | Saudi Arabia MoH | ECDC factsheet for professionals

ECDC assessment

The source of MERS-CoV infection and the mode of transmission have not been identified. Dromedary camels are a host species for the virus, and many of the primary cases in MERS-CoV clusters have reported direct or indirect camel exposure. Almost all of the recently reported secondary cases, many of whom are asymptomatic or have only mild symptoms, have been acquired in healthcare settings. There is therefore a continued risk of cases presenting in Europe following exposure in the Middle East. International surveillance for MERS-CoV cases is essential.

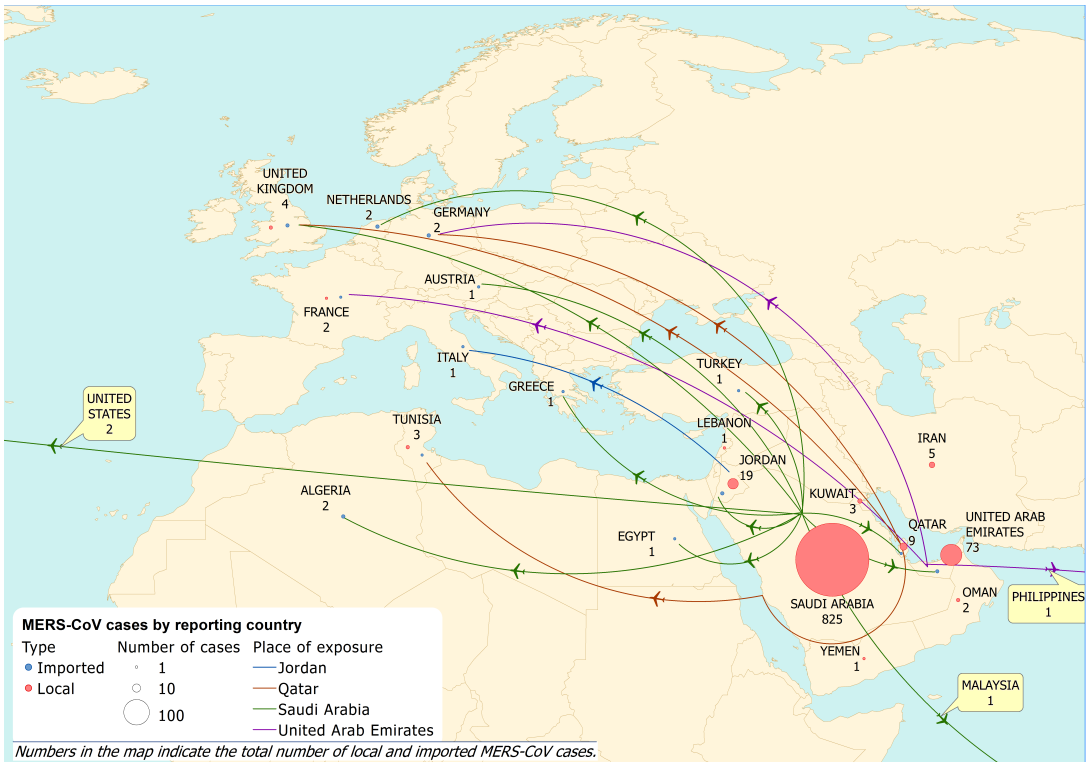
The risk of secondary transmission in the EU remains low and can be reduced further through screening for exposure among patients presenting with respiratory symptoms (and their contacts), and strict implementation of infection prevention and control measures for patients under investigation.

Actions

ECDC published an epidemiological update on 6 November 2014.
The last rapid risk assessment was updated on 16 October 2014.
ECDC is closely monitoring the situation in collaboration with WHO and EU Member States.
ECDC published a factsheet for health professionals regarding MERS-CoV on 20 August 2014.

Geographical distribution of confirmed MERS-CoV cases and place of probable infection, worldwide, as of 01 January 2015 (n=962)

Source: ECDC



Numbers in the map indicate the total number of local and imported MERS-CoV cases.

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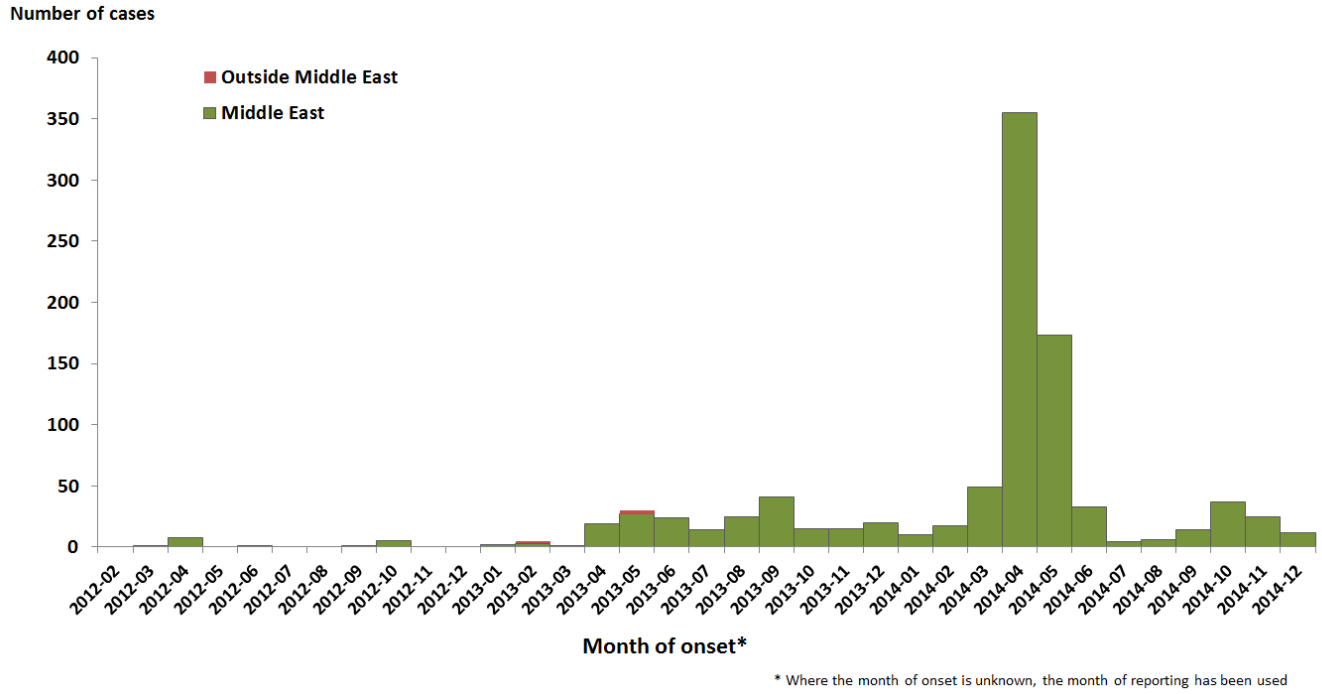
Distribution of confirmed cases of MERS-CoV by first available date and place of probable infection, March 2012 – 01 January 2015 (n=962)

Source: ECDC



Ebola Virus Disease Epidemic - West Africa - 2014

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

Epidemiological summary

Distribution of cases as of 28 December 2014:

Countries with intense transmission:

- Guinea: 2 707 cases and 1 709 deaths.
- Liberia: 8 018 cases and 3 423 deaths.
- Sierra Leone: 9 446 cases and 2 758 deaths.

Countries with an initial case or cases, or with localised transmission:

- The UK: one confirmed case on 29 December.
- United States: four cases including one death. The last case tested negative on 11 November 2014 in New York.
- Mali: eight cases, six deaths.
- Nigeria, Senegal and Spain are declared free of EVD after having cases related to this current epidemic in West Africa.

Situation in specific West African countries

According to WHO, in the three countries with widespread and intense transmission, the incidence is fluctuating in Guinea and declining in Liberia while in Sierra Leone there are signs that the increase in incidence has slowed, although the west of the country is now experiencing the most intense transmission of all the affected countries. The reported case-fatality rate in the three intense-transmission countries among all cases for whom a definitive outcome is known is 71%.

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Situation among healthcare workers

Up to the end of 28 December 2014, 678 healthcare workers (HCWs) are known to have been infected with EVD, 382 of whom have died. This includes two HCWs in Mali, 11 HCWs infected in Nigeria, one HCW infected in Spain while treating an EVD-positive patient, one HCW in the UK who became infected in Sierra Leone, and three HCWs in the USA (one HCW infected in Guinea, and two HCWs infected during the care of a patient in Texas). Two HCW infections were reported in the week leading up to 28 December: one in Montserrado in Liberia, and one in Keroune in Guinea.

Situation outside of West Africa

The United Kingdom

One case was reported in Scotland in a patient who travelled from Sierra Leone via Casablanca and London and arrived in Glasgow late on 28 December. She reportedly had not displayed any symptoms of infectious Ebola throughout the journey. After feeling unwell with fever and myalgia, the patient was admitted to a hospital and placed into strict isolation on the morning of 29 December. Ebola virus disease was confirmed by RT-PCR later on the same day. The patient was transferred to London for treatment in isolation on 30 December. The clinical condition of the patient is currently stable.

Although the risk of infection to other passengers on the flights is considered extremely low, Public Health England is contacting passengers and crew on the flight from Casablanca to Heathrow. These passengers will be made aware that a person on their flight was confirmed with Ebola although the person would have been in the very early stages of disease and extremely unlikely to be infectious. Health Protection Scotland is carrying out a similar exercise for the passengers on the Heathrow to Glasgow flight. The people sitting directly of the vicinity of the passenger (two rows adjacent, ahead and behind) are advised to take their temperature twice daily until 18 January 2015. If their temperature is 37.5°C or higher, or they begin to feel unwell in any way, they are advised to call a dedicated Public Health England contact immediately for advice.

No high-risk contacts have been identified in connection with the EVD case in the United Kingdom.

Medical evacuations and repatriations from EVD-affected countries

Twenty-four individuals have been evacuated or repatriated from the EVD-affected countries. As of 31 December, there have been 12 medical evacuations of confirmed EVD-infected patients to Europe (three to Germany, three to Spain, two to France, one to the UK, one to Norway, one to Italy and one to the Netherlands). Two persons exposed to Ebola have been repatriated to the Netherlands and tested negative. One individual was evacuated to Switzerland and was confirmed not to have EVD in September.

Figures

First epi-curve: Distribution of reported cases of EVD by week of reporting in Guinea, Sierra Leone, Liberia, Nigeria, Mali and Senegal, weeks 48/2013 to 52*/2014

* In week 45/2014, WHO carried out retrospective correction in the data, resulting in 299 fewer cases being reported, which resulted in a negative value for new cases in week 45 which is not plotted.

** According to WHO, the marked increase in the cumulative total number of cases in week 43 is due to a more comprehensive assessment of patient databases leading to 3 792 additional reported cases. However, these cases have occurred throughout the epidemic period.

Second epi-curve: Distribution of cases of EVD by week of reporting in the three countries with widespread and intense transmission, as of week 52* 2014.

* The marked increase in the number of cases reported in Sierra Leone (week 44) and Liberia (week 43) resulted from a more comprehensive assessment of patient databases. The additional 3 792 cases have occurred throughout the epidemic period.

** In week 45/2014, WHO reported -476 cases in Sierra Leone due to retrospective corrections.

§ In week 44/2014, WHO reported zero cases for Liberia.

Web sources: ECDC Ebola page | ECDC Ebola and Marburg fact sheet | WHO Ebola Factsheet | CDC | WHO Roadmap |

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ECDC assessment

This is the largest ever documented epidemic of EVD in terms of numbers and geographical spread. The evolving epidemic of EVD increases the likelihood that EU residents and travellers to the EVD-affected countries will be exposed to infected or ill persons. The risk of infection for residents and visitors in the affected countries through exposure in the community is considered low if they adhere to the recommended precautions. Residents and visitors to the affected areas run a risk of exposure to EVD in healthcare facilities. The level of this risk is related to how well the infection control measures are being implemented in these settings and the nature of the care required. As the epidemic is still evolving and more international staff are deployed to the affected countries to support the epidemic control, there remains a risk of importation of EVD cases to the EU. The risk of Ebola virus spreading from an EVD patient who arrives in the EU as result of a planned medical evacuation is considered to be low when appropriate measures are strictly adhered to, but cannot be excluded in exceptional circumstances. If a symptomatic case of EVD presents in an EU Member State, secondary transmission to caregivers in the family and in healthcare facilities cannot be excluded. The highest risk is at an early stage of the disease, before the risk of EVD has been recognised, and at the late stage of the disease when patients have very high viral loads and undergo invasive therapeutic procedures.

Actions

An epidemiological update is published weekly on the EVD ECDC page.
On 4 December, EFSA-ECDC published a Scientific report assessing Risk related to household pets in contact with Ebola cases in humans.
On 18 November, ECDC published an updated rapid risk assessment.
On 10 September, ECDC published an EU case definition.
On 22 September ECDC published assessment and planning for medical evacuation by air to the EU of patients with Ebola virus disease and people exposed to Ebola virus.
On 6 October ECDC published risk of transmission of Ebola virus via donated blood and other substances of human origin in the EU.
On 13 October, ECDC published Infection prevention and control measures for Ebola virus disease: Entry and exit screening measures.
On 22 October ECDC published Assessing and planning medical evacuation flights to Europe for patients with Ebola virus disease and people exposed to Ebola virus.
On 23 October ECDC published Public health management of persons having had contact with Ebola virus disease cases in the EU.
On 29 October, ECDC published a training tool on the safe use of PPE and options for preparing for gatherings in the EU

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Distribution of cases of EVD by week of reporting in Guinea, Sierra Leone, Liberia and Mali (as of week 50/2014)

Source: Adapted from national situation reports

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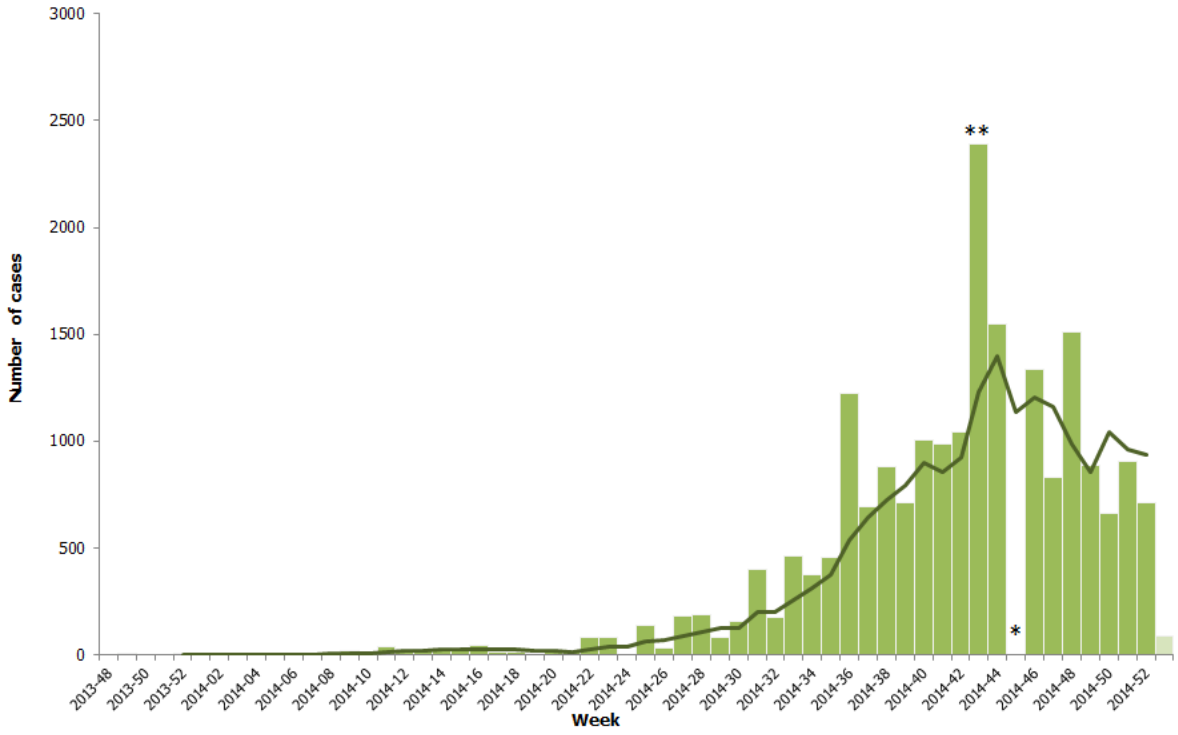
Distribution of reported cases of EVD by week of reporting in Guinea, Sierra Leone, Liberia, Mali, Nigeria and Senegal, weeks 48/2013 to 53*/2014

Source: Adapted from WHO figures; *data for week 53 are incomplete



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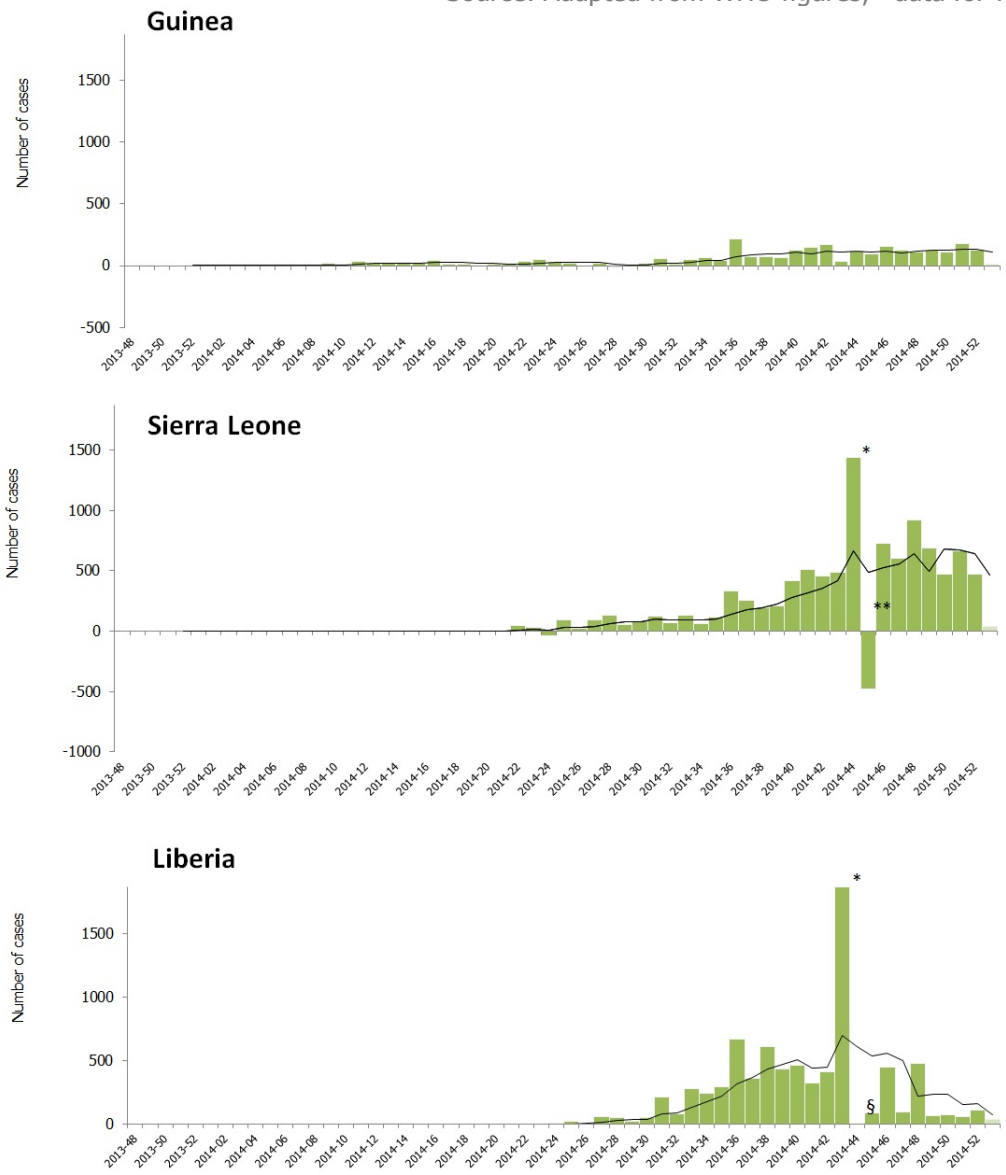
Distribution of cases of EVD by week of reporting in the three countries with widespread and intense transmission, as of week 53* 2014

Source: Adapted from WHO figures; *data for week 53 are incomplete



Influenza A(H5N1) - Multistate (world) - Monitoring human cases

Opening date: 15 June 2005 Latest update: 1 January 2015

Epidemiological summary

During 2014, Egypt reported 29 cases of A(H5N1), including 11 deaths as of 1 January 2015. Most of these cases occurred in November and December.

The Ministry of Health of Egypt is encouraging all who work with poultry and experience any cold-like symptoms to seek immediate medical care.

Worldwide, from 2003 to 4 December 2014, 676 cases, including 398 deaths, were reported from 16 countries to WHO. Of these cases, 398 have died.

Web sources: ECDC Rapid Risk Assessment | Avian influenza on ECDC website | WHO update |

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ECDC assessment

The occurrence of sporadic cases or small clusters in Egypt is not unexpected as avian influenza A(H5N1) viruses are known to be circulating in poultry in the country. According to WHO EMRO (the Regional Office for the Eastern Mediterranean), Egypt has been the most affected country in the region since 2003 where the disease has remained endemic.The increase in the number of human cases reported in Egypt in 2014 does not change the current risk status of this epidemic.

Most human infections of A(H5N1) are the result of direct contact with infected birds, and countries with large poultry populations in close contact with humans are considered to be most at risk of bird flu outbreaks. There are currently no indications of a significant change in the epidemiology associated with any clade or strain of the A(H5N1) virus from a human health perspective. This assessment is based on the absence of sustained human-to-human transmission, and on the observation that there is no apparent change in the size of clusters or reports of chains of infection. However, vigilance for avian influenza in domestic poultry and wild birds in Europe remains important.

Actions

ECDC follows the worldwide A(H5N1) situation through epidemic intelligence activities in order to identify significant changes in the epidemiology of the virus. ECDC re-assesses the potential of a changing risk for A(H5N1) to humans on a regular basis.

ECDC published a rapid risk assessment covering A(H5N1) in Egypt on 23 December 2014.

WHO is now reporting H5N1 cases on a monthly basis. ECDC will continue monthly reporting in the CDTR to coincide with WHO reporting.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 1 January 2015

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, human cases have continued to be reported, and as of 16 December 2014, there were 470 cases including 182 deaths: Zhejiang (141), Guangdong (111), Jiangsu (59), Shanghai (43), Fujian (23), Hunan (24), Anhui (18), Jiangxi (6), Henan (4), Beijing (5), Guangxi (4), Shandong (4), Hebei (1), Guizhou (1), Jilin (2), Xinjiang Uygur Autonomous Region (8), Hong Kong (11), Taiwan (4) and one imported case in Malaysia.

Most cases have developed severe respiratory disease.

Web sources: Chinese CDC | WHO | WHO FAQ page | ECDC | WHO DON 29 October |

ECDC assessment

This outbreak is caused by a novel reassortant avian influenza virus capable of causing severe disease in humans. Currently, the most likely scenario is that this remains a local, although geographically widespread, zoonotic outbreak, in which the virus is transmitted sporadically to humans in close contact with the animal reservoir, similar to the influenza A(H5N1) situation. It is expected that there may be further sporadic cases of human infection with the virus in affected and possibly neighbouring areas in China. Affected provinces and municipalities continue to maintain surveillance and response activities.

Imported cases of influenza A(H7N9) may be detected in Europe. However, the risk of the disease spreading among humans following an importation to Europe is considered to be very low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation in Europe.

Actions

The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, including scientific research. ECDC is monitoring developments and updates reports on a monthly basis.

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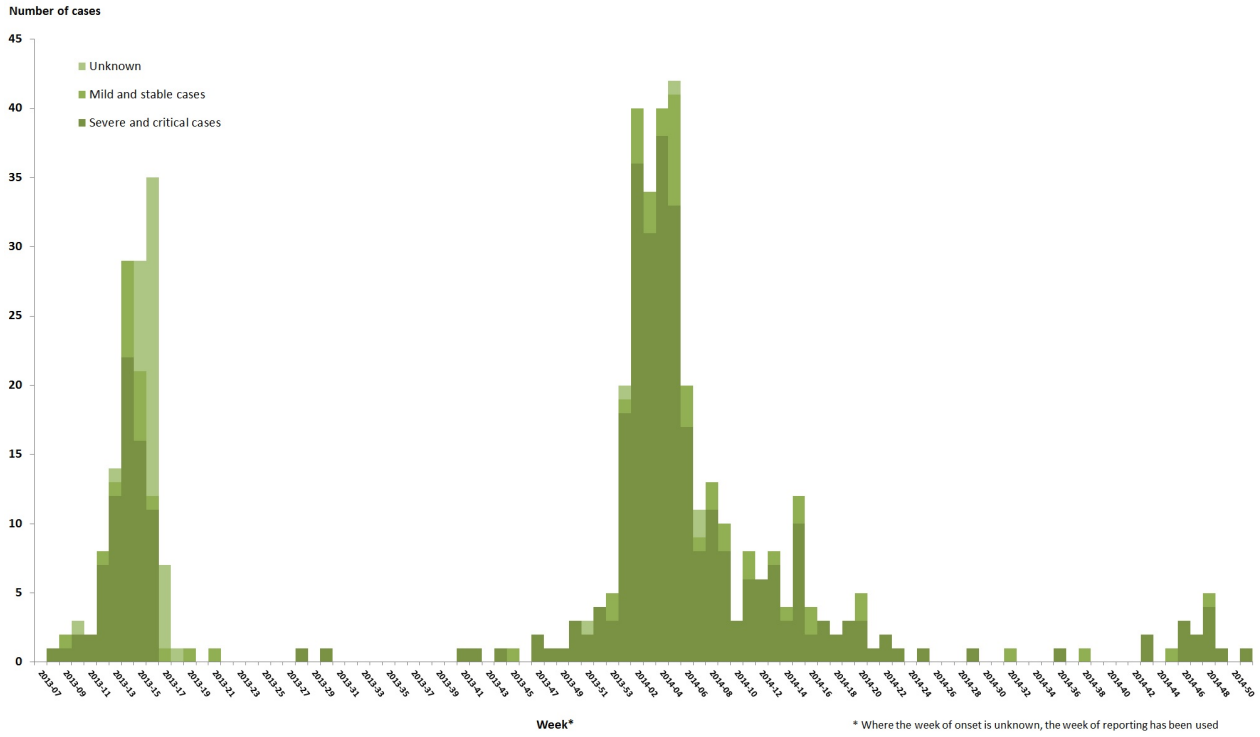
ECDC published an updated Rapid Risk Assessment on 26 February 2014.

ECDC published a guidance document Supporting diagnostic preparedness for detection of avian influenza A(H7N9) viruses in Europe for laboratories on 24 April 2013.

Distribution of avian influenza A(H7N9) cases by first available week*, as of 01 January 2015 (n=470)

Source: ECDC



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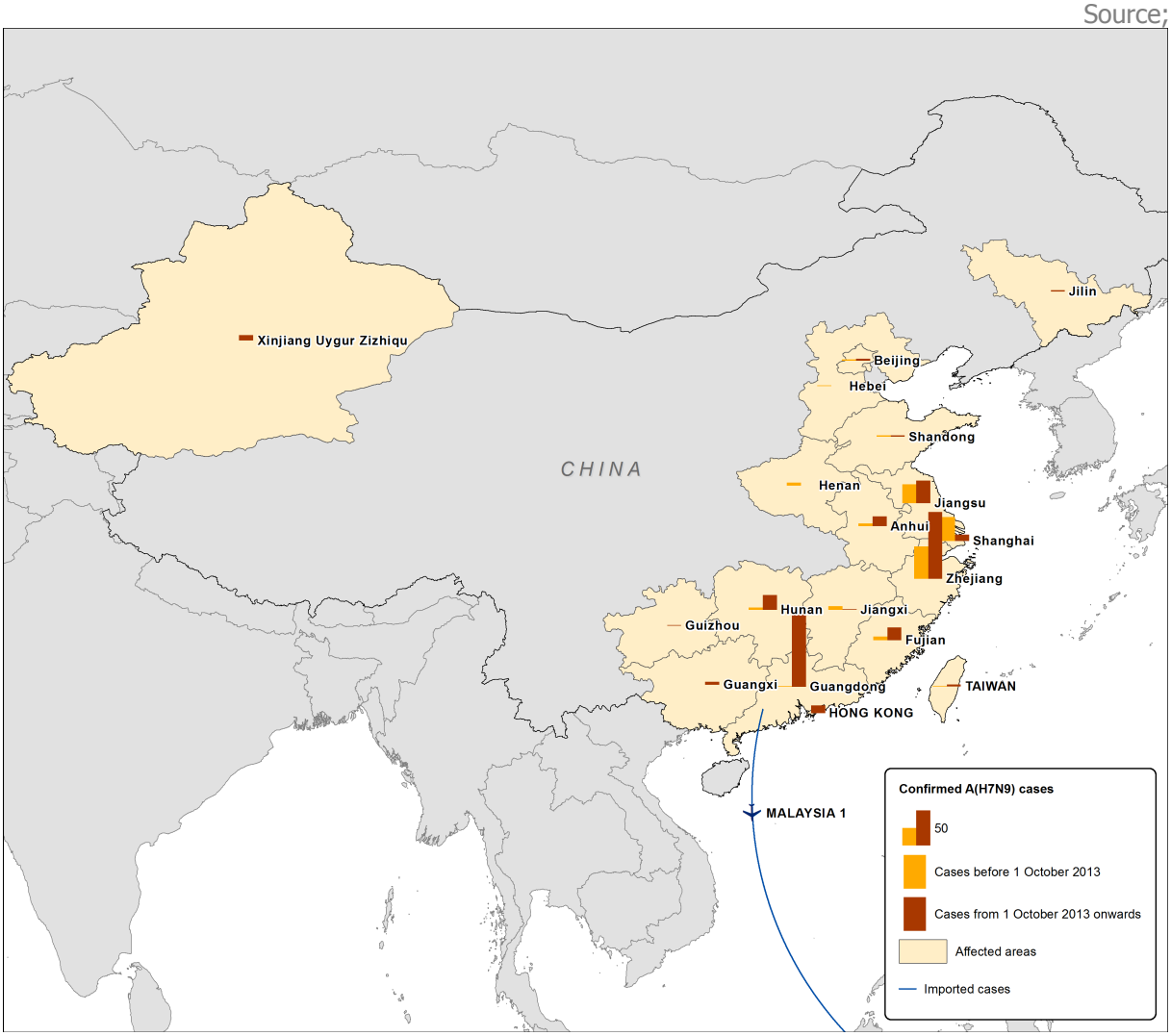
Distribution of cumulative number of human cases of avian influenza A(H7N9), by province and date, China, week 14/2013 to week 53/2014

Source; ECDC



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

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