COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 8, 17-23 February 2013

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Influenza - Multistate (Europe) - Monitoring 2012-2013 season

Opening date: 2 December 2011 Latest update: 8 February 2013

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity seen during winter months. ECDC monitors influenza activity in Europe during the winter seasons and publishes the results on its website in the Weekly Influenza Surveillance Overview.

➔Update of the week

For week 7/2013, 19 of the 29 countries reporting indicated concomitantly high/medium-intensity transmission and wide geographic spread. Ten countries reported decreasing trends, the first time since the beginning of influenza transmission for five of them.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 22 October 2012

Measles, a highly transmissible vaccine-preventable disease, is still endemic in many countries of Europe due to a decrease in the uptake of immunisation. More than 30 000 cases were reported in EU Member States in each of the last two years. However, the number of outbreaks and reported cases in Member States in 2012 were significantly lower than during 2010 and 2011. The 29 participating EU and EEA countries reported 8 230 cases to the European Surveillance System for 2012. France, Italy, Romania, Spain and the United Kingdom accounted for 94% of all reported cases.

➔Update of the week

During the week leading up to 22 February 2013, no new large outbreaks were reported in EU Member States.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 19 September 2012

Rubella, caused by the rubella virus and commonly known as German measles, is usually a mild and self-limiting disease and is an infection which often passes unnoticed. The main reason for immunising against rubella is the high risk of congenital malformations associated with rubella infection during pregnancy. All EU Member States recommend vaccination against rubella with at least two doses of vaccine for both boys and girls. The vaccine is given at the same intervals as the measles vaccine as part of the MMR vaccine.

➔Update of the week

During the week leading up to 21 February 2013, no new outbreaks were detected in EU Member States.

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Non EU Threats

Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012 Latest update: 15 February 2013

During the period April 2012 to February 2013, thirteen laboratory-confirmed cases of respiratory illness caused by the novel coronavirus (novel CoV) have been reported to the World Health Organization (WHO). There have been seven associated deaths and two patients remain very ill. Cases have occurred in Saudi Arabia, Qatar, Jordan and the United Kingdom. The novel coronavirus has been temporarily named hCoV-EMC.

➔Update of the week

Three new confirmed cases have been diagnosed in the UK in the last ten days. The second and third cases were infected through human-to-human transmission although the exact route of transmission is still under investigation by the UK authorities. In addition, the Ministry of Health in Saudi Arabia has also reported a new confirmed case of infection with the novel coronavirus.

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

Opening date: 15 June 2005 Latest update: 22 February 2013

The influenza A(H5N1) virus, commonly known as bird flu, is fatal in about 60% of human infections, and 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

On 15 February 2013, WHO acknowledged one new case of influenza A(H5N1) virus in Egypt which was fatal and two cases in China. The two laboratory-confirmed cases in China were reported in Guizhou. On 21 February one new confirmed fatal case was reported through WHO in Cambodia.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 21 February 2013

Polio, a crippling and potentially fatal vaccine-preventable disease mainly affecting children under five years of age, is close to being eradicated from the world after a significant global public health investment and effort. The WHO European Region is polio-free. Worldwide, 223 cases were reported in 2012 compared with 650 cases in 2011. Two polio cases have been reported so far in 2013.

➔Update of the week

During the week leading up to 22 February 2013, one new WPV1 case was reported from Kano, Nigeria.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 21 February 2013

Dengue fever is one of the most prevalent vector-borne diseases in the world, affecting an estimated 50-100 million people each year, mainly in the tropical regions of the world. The identification of sporadic autochthonous cases in non-endemic areas in recent years has already highlighted the risk of the occurrence of locally acquired cases in EU countries where the competent vectors are present. The detection of a dengue outbreak in the Autonomous Region of Madeira, Portugal, further underlines the importance of surveillance and vector control in other European countries.

➔Update of the week

The Autonomous Region of Madeira, Portugal, experienced an outbreak of dengue starting in October 2012 with sporadic cases still being reported. So far in 2013, no autochthonous dengue cases have been reported in other European countries.

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II. Detailed reports

Influenza - Multistate (Europe) - Monitoring 2012-2013 season

Opening date: 2 December 2011 Latest update: 8 February 2013

Epidemiological summary

Weekly reporting on influenza surveillance in Europe for the 2012/13 season started in week 40/2012 but active influenza transmission began around week 49/2012, approximately six weeks earlier than in the 2011/12 season.

- For week 7/2013, the proportion of influenza-positive cases among sentinel specimens remained high (52%) but had decreased somewhat from week 6/2013 and a peak of 59%.
- Since week 40/2012, an even distribution of influenza virus types has been observed, 50% each for type A and type B viruses. Among influenza A viruses, an increasing proportion of A(H1)pdm09 over A(H3) has been reported since week 52/2012.
- For week 7/2013, 78 hospitalised laboratory-confirmed influenza cases were reported by five countries (Belgium, France, Romania, Slovakia, and Spain), 48 (62%) tested positive for influenza type A and 30 (38%) for type B.

On 8 February 2012, ECDC published its annual risk assessment for seasonal influenza 2012/13 based on data up to week 03/2013.

Web source: ECDC Weekly Influenza Surveillance Overview |

ECDC assessment

Influenza activity remained substantial in week 7/2013 across Europe but an increasing number of countries reported indications of declining transmission.

Actions

ECDC has updated its influenza website for the start of the season.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 22 October 2012

Epidemiological summary

No new large outbreaks were detected during the past week.

Web sources: ECDC measles and rubella monitoring | ECDC/Euronews documentary | WHO Epidemiological Brief | MedISys Measles page | EUVAC-net ECDC | ECDC measles factsheet

ECDC assessment

So far in 2013, only the UK has reported outbreaks. In 2012, considerably fewer measles cases were reported in the EU than in 2011, primarily due to the dramatic decrease in the number of cases reported from France. There was no increase in the number of cases during the peak transmission season from February to June and there have been very few outbreaks detected by epidemic intelligence methods in 2012. There have been no measles-related deaths during the last 12 months, but seven cases were complicated by acute measles encephalitis. The reduction in notified cases in 2012 indicates that the incidence at EU/EEA level is back at the level before the 2010–2011 outbreaks, but does not signify a long-term downward trend in measles notifications.

ECDC closely monitors measles transmission and outbreaks in the EU and neighbouring countries in Europe through enhanced surveillance and epidemic intelligence activities. The countries in the WHO European Region, which include all EU Member States, have committed to eliminating measles and rubella transmission by 2015. Elimination of measles requires consistent vaccination coverage above 95% with two doses of measles vaccine in all population groups, strong surveillance and effective outbreak control measures.

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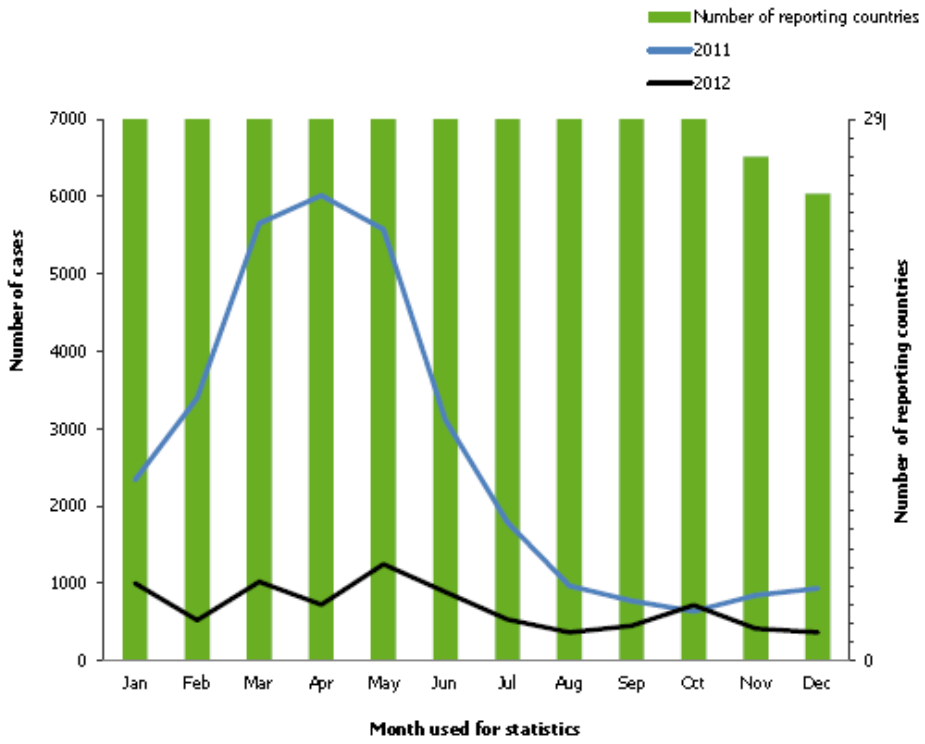
Number of measles cases in 2011-2012 and number of EU and EEA countries reporting

ECDC



Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 19 September 2012

Epidemiological summary

No new outbreaks have been identified since the last update.

There were 27 267 cases of rubella reported during 2012 by the 26 EU and EEA countries which contribute to the enhanced surveillance for rubella. Poland and Romania accounted for 99% of all reported rubella cases in the 12-month period.

Web sources: ECDC measles and rubella monitoring | WHO epidemiological brief summary tables | ECDC rubella factsheet

ECDC assessment

As rubella is typically a mild and self-limiting disease with few complications, the rationale for eliminating rubella would be weak if it were not for the virus' teratogenic effect. When a woman is infected with the rubella virus within the first 20 weeks of pregnancy, the foetus has a 90% risk of being born with congenital rubella syndrome (CRS), which entails a range of serious incurable illnesses. CRS surveillance plays an important role but tends to be biased towards the severe end of the spectrum as the rubella infection is known to cause a wide range of conditions from mild hearing impairment to complex malformations which are incompatible with life. Routine control of immunity during antenatal care is important for identifying susceptible women who can be immunised after giving birth and for surveillance of the size of the susceptible female population. The increase in the number of rubella cases reported in 2012 compared with 2011 and the potential for an increase in the number of babies born with CRS are of concern.

Actions

ECDC closely monitors rubella transmission in Europe by analysing the cases reported to the European Surveillance System and through its epidemic intelligence activities. Twenty-four EU and two EEA countries contribute to the enhanced rubella surveillance. The purpose of the enhanced rubella monitoring is to provide regular and timely updates on the rubella situation in Europe in support of effective disease control, increased public awareness and the achievement of the 2015 rubella and congenital rubella elimination target.

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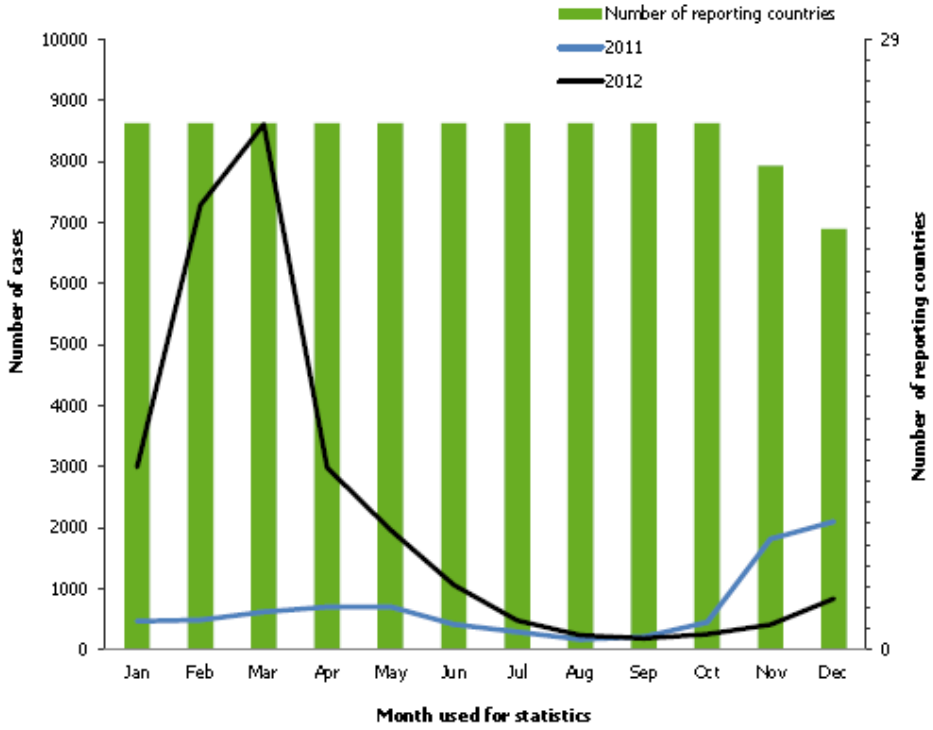
Number of rubella cases in 2011 and 2012 and number of EU and EEA countries

ECDC



Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012 Latest update: 15 February 2013

Epidemiological summary

The first case confirmed with the novel coronavirus was reported in a 60-year-old male resident of Saudi Arabia who died from severe pneumonia complicated by renal failure in Jeddah on 24 June 2012. The genome of the new coronavirus was isolated from this case, sequenced and the genetic code put in the public domain. In September 2012, a second case, a 49-year-old male living in Qatar, presented with similar symptoms and was transferred for care in Europe. A virus was isolated from this case which was almost identical to the virus from the case in Saudi Arabia. In November 2012, additional cases with similar symptomatology were diagnosed in Qatar and Saudi Arabia, including a family cluster of three confirmed cases and one probable case. Subsequently, two fatal cases were confirmed retrospectively in Jordan from within a cluster of 11 people with severe lower respiratory infections that were associated with a hospital in April 2012.

On 11 February 2013, the HPA published details of a male UK resident with confirmed novel coronavirus infection who had travelled to Pakistan and the Middle East, developed respiratory symptoms on 24 January 2013 and then had arrived unwell in the UK on 28 January 2013. His condition deteriorated and he was admitted to hospital where he is in intensive care. On 6 February 2013, a male household member who had contact with the patient from his arrival in the UK until hospital admission fell unwell. This patient had an existing medical condition that may have made him more susceptible to a severe respiratory infection. His respiratory condition deteriorated and he was admitted to hospital, where he subsequently died. The third confirmed case is a younger female family member, who only had exposure to the original index case while he was in hospital. She became ill on 5 February 2013 with a typical flu-like illness, which did not require hospital admission and from which she has now fully recovered. Unlike the source case, neither of these two contacts have travelled abroad recently. HPA is actively investigating the possible route of infection. Infection control measures around the three cases are following national UK guidance and case-finding is ongoing for those who may have been exposed. Active follow-up of contacts of the three confirmed cases had not detected any additional confirmed secondary cases by 18 February 2013.

The Ministry of Health in Saudi Arabia has reported another confirmed case of infection with the novel coronavirus. The patient was hospitalised on 29 January 2013 and died on 10 February 2013. The case was laboratory-confirmed on 18 February 2013. Further investigation into this case is ongoing.

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This brings the number of laboratory-confirmed cases of NCoV infections to thirteen globally, of which seven cases were fatal.

Web sources: WHO| HPA press release 11 February |HPA press release 15 February |HPA update 19 February |ECDC updated RRA 19 February |WHO revised interim case definition 19 February | ECDC novel coronavirus website |WHO update 21 February 2013

ECDC assessment

Research on the complete genome sequence of HCoV-EMC/2012 has characterised the virus as a new genotype that is closely related to bat coronaviruses that are distinct from SARS-CoV. The routes of transmission to humans have not yet been determined. This is a common problem with emerging zoonoses where there is often simultaneous possibilities including environmental, animal and human exposures.

The recent three cases detected in the UK have changed the assessment of the situation regarding this novel coronavirus. The fact that an infection has come to Europe on a commercial flight and then resulted in two probable human-to-human transmission episodes has increased the threat, although the cluster has been restricted to one family.

There are now two instances of documented human-to-human transmission within the recent UK cluster. However, it is important to quantify infectivity and there is also evidence suggesting low infectivity at a population level. In Germany and the UK, follow-up of nearly 200 personal contacts and healthcare workers exposed to the first two imported confirmed cases has been completed and did not find evidence of human-to-human transmission.

The appearance of a milder secondary case might indicate that that milder cases could be present and potentially spread the infection but be missed in case-finding. This highlights the need for further work to document the spectrum of illness.

Actions

In light of the human-to-human transmission of the NCoV within the family cluster in the UK, ECDC has updated its rapid risk assessment, previously published on 7 December 2012. The results of a survey to determine the laboratory capacity for testing for the novel coronavirus in Europe, conducted by ECDC in coordination with WHO Regional Office for Europe, was published recently in EuroSurveillance.

HPA has identified 100 people who had close contact with the cases in the family cluster and they were followed up. To date all tests have been negative. HPA has informed all countries whose residents may have been contacts of the index case during the flight from Jeddah to Heathrow (within 2 rows).

ECDC continues to closely monitor this event.

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

Opening date: 15 June 2005 Latest update: 22 February 2013

Epidemiological summary

The latest WHO update on 15 February acknowledged seven new human cases with influenza A(H5N1) virus infection, including six fatal cases, in Cambodia and two new human cases in China who remain in critical condition. The Chinese cases come from the same province but do not seem to be epidemiologically linked. Neither had documented contact with sick or dead poultry. These cases have already been included in last week's CDTR.

In addition, Egypt has reported one new fatal human case with influenza A(H5N1) virus infection in Behera Governorate in a female patient. An investigation found that she had been exposed to sick or dead poultry. This case has not been reported previously.

On 21 February 2013, WHO and the Ministry of Health of Cambodia reported in a joint press release about another fatal case of influenza A(H5N1) virus in Cambodia. The new case is a 20-month-old boy from Kampot province who was found positive for influenza H5N1 on 19 February 2013 by Institut Pasteur du Cambodge.

Globally since 2003, there have been 621 laboratory confirmed cases of avian influenza with 368 related deaths.

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

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ECDC assessment

Hong Kong reported the world's first recorded major outbreak of bird flu among humans in 1997, when six people died. Most human infections 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. 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. There are currently no indications that from a human health perspective there is any significant change in the epidemiology associated with any clade or strain of the A(H5N1) virus. 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.

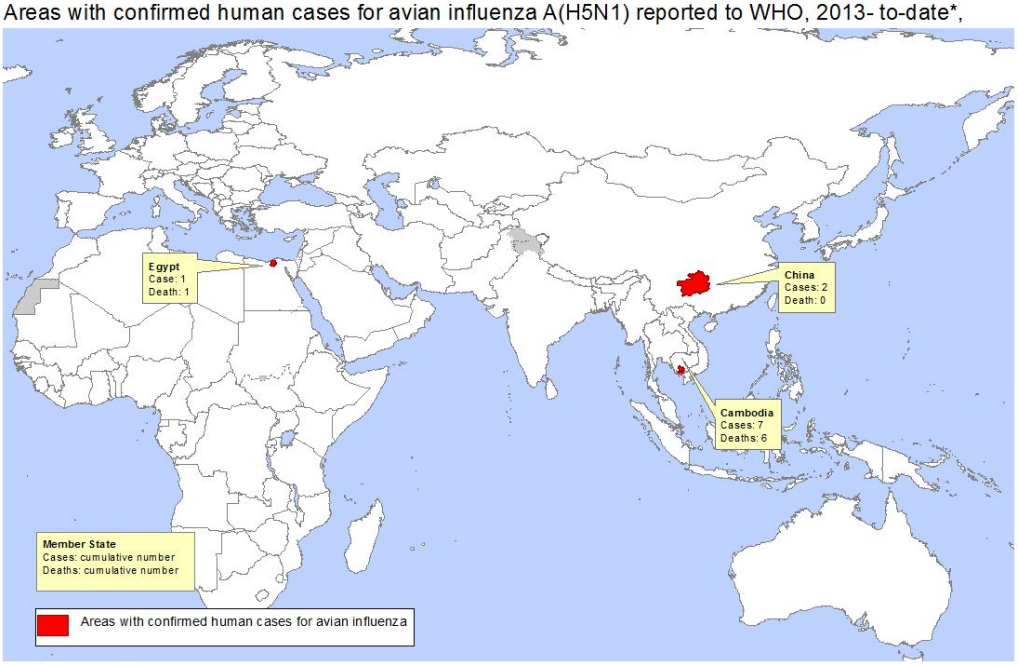
Actions

WHO is now reporting H5N1 cases on a monthly basis. ECDC will continue monthly reporting in the CDTR to coincide with WHO reporting. The CDTR includes the A(H5N1) threat this week due to the new reported cases in Cambodia, China and Egypt.

H5N1 distribution in 2013

WHO

Areas with confirmed human cases for avian influenza A(H5N1) reported to WHO, 2013- to-date*,



*All dates refer to onset of illness
Data as of 15 February 2013
Source: WHO/GIP

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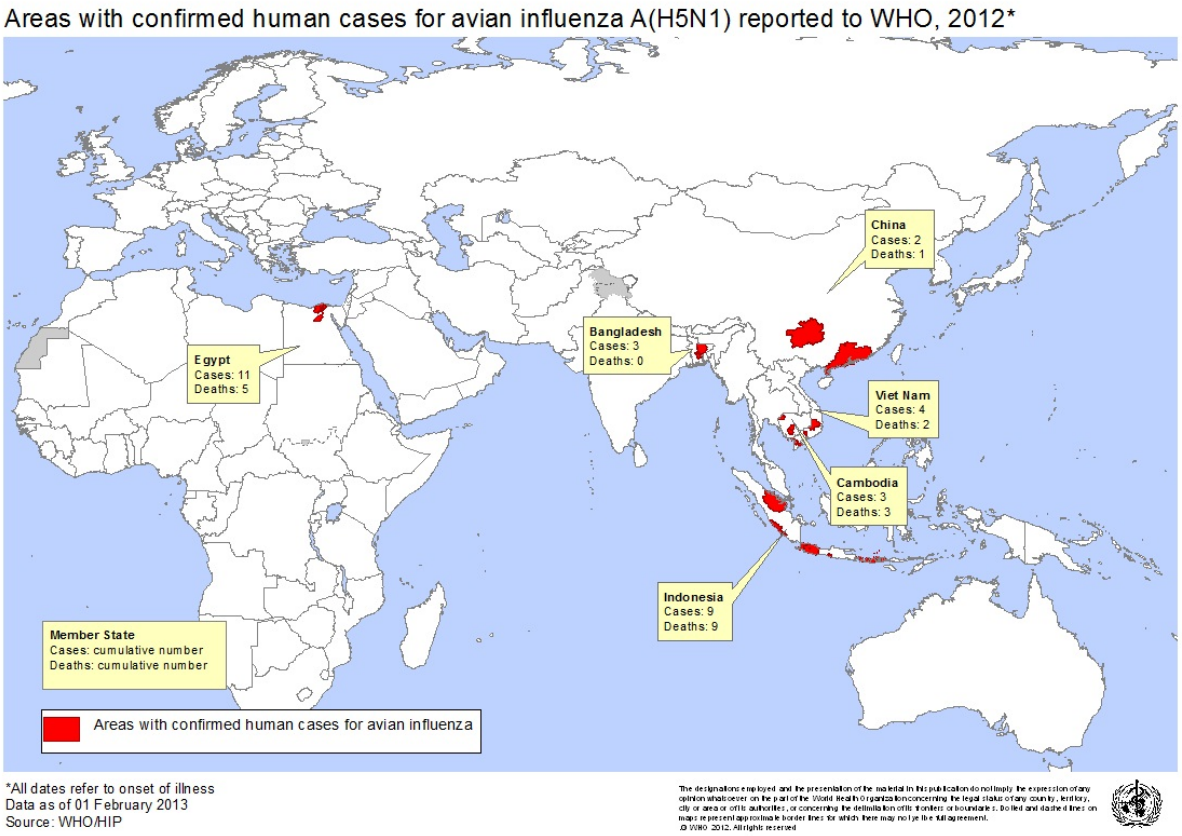
Areas with human cases of influenza A(H5N1) reported in 2012-2013

WHO



Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 21 February 2013

Epidemiological summary

WHO reported one new case of WPV1 from Nigeria during the past week. The number of cases with onset of paralysis in 2013 is two, compared with 14 cases for the same time period in 2012.

One new cVDPV2 case was reported from Somalia linked to a cVDPV2 outbreak ongoing in south-central Somalia since 2011. Additionally, in 2012 this outbreak spread across the border to Kenya, with three cases reported from Dadaab, in North Eastern Province between April and June 2012.

Two new cases of cVDPV2 were reported from Afghanistan, bringing the number of cVDPV2 cases to nine in 2012, and one so far in 2013.

Web sources: Polio Eradication: weekly update | MedISys Poliomyelitis | ECDC Poliomyelitis factsheet | WHO EMRO |

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ECDC assessment

2012 ended with the fewest wild polio cases ever reported. Two hundred and twenty-two wild polio cases were reported in 2012 – a reduction of over 60% compared with 2011.
However, there are profound concerns about the polio situation for 2013, especially due to difficulties in the implementation of the immunisation programme in Pakistan. The programme has been severely affected by the recent attacks that have killed several polio vaccination campaign workers in Pakistan. This may well have an effect on neighbouring Afghanistan, which, together with Pakistan and Nigeria, is one of the three remaining polio-endemic countries in the world. Other neighbouring countries, such as China, where a polio outbreak in 2011 was imported from Pakistan, will be equally at risk. The discovery of the wild polio virus strain in Egypt linked to Pakistan and the recent violence against healthcare workers in Nigeria, gives further cause for unease.

The WHO European Region so far remains polio-free.

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

The last polio cases in the European Union occurred in 2001 when three young Bulgarian children of Roma ethnicity developed flaccid paralysis from WPV. Investigations showed that the virus originated from India. The latest outbreak in the WHO European Region was in Tajikistan in 2010 when WPV1 imported from Pakistan caused an outbreak of 460 reported cases. The last indigenous WPV case in Europe was in Turkey in 1998. An outbreak in the Netherlands in a religious community opposed to vaccinations caused two deaths and 71 cases of paralysis in 1992.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 21 February 2013

Epidemiological summary

Europe: There have been no reports of confirmed autochthonous dengue infections in Europe in 2013, besides the on-going dengue outbreak in Madeira.

Asia: There is no new update from WHO Western Pacific Region. In Thailand, more than 5 700 cases of dengue fever have been reported since the beginning of the year, according to the Ministry of Health.

Latin America: In Central America, high dengue activity is reported across Mexico. El Salvador and Honduras are experiencing increased activity. In South America, there is an increasing trend of dengue activity reported in Brazil, Colombia, Ecuador, Bolivia and Paraguay. Over the next three months, the Ministry of Health in Paraguay is strengthening control measures following the appearance of DENV-4 in the Amambay department. The predominant serotype in Paraguay is DENV-2.

The Caribbean: Puerto Rico is reporting an increasing trend of dengue cases this week. The Dominican Republic has reported 1 323 suspected cases so far this year. The Cayman Islands has not reported any new confirmed dengue cases since 18 January, according to local health authorities.

Africa: According to a media report, WHO has issued an alert for dengue in Kenya following 28 confirmed cases in neighbouring Somalia. Dengue fever was last reported in northern Kenya in 2011, in Mandera town, bordering Somalia and Ethiopia.

Web sources:
HealthMap | MedISys | ProMED Asia update| ProMED Americas update| WPRO | CDC |

ECDC assessment

ECDC monitors individual outbreaks, seasonal transmission patterns and inter-annual epidemic cycles of dengue through epidemic intelligence activities in order to identify significant changes in disease epidemiology. Of particular concern is the potential for the establishment of dengue transmission in Europe. Before the current outbreak in the Autonomous Region of Madeira, local transmission of dengue was reported for the first time in France and Croatia in 2010. Imported cases are detected in European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

Actions

ECDC has published a technical report on the climatic suitability for dengue transmission in continental Europe and guidance for invasive mosquitoes' surveillance.

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