COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 11, 11-17 March 2012

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Schmallenberg Virus - Multistate (Europe) - New virus in ruminants

Opening date: 20 December 2011 Latest update: 15 March 2012

Schmallenberg virus (SBV), a novel *Orthobunyavirus*, has been associated with disease in ruminants (cattle, sheep and goats) in several countries in Europe since November 2011. Additionally, one bison has been confirmed positive for *Schmallenberg virus* in Germany. The disease causes transient clinical symptoms in adult cattle (fever, diarrhoea, reduced milk yield, etc.) and congenital malformation in newborn ruminants. No human cases have been reported by affected countries. ECDC published an assessment of the risk to humans from *Schmallenberg virus* on 23 December 2011. Transmission to humans is considered unlikely but cannot be ruled out.

➔Update of the week

On 13 March 2012, the World Organisation for Animal Health (OIE) reported on the detection of the *Schmallenberg virus* in Spain.

Last week the Dutch Central Veterinary Institute found anti-SBV antibodies in 70 percent of samples takenfrom Dutch cattle between 1 November 2011 and 1 February 2012, indicating widespread infection and an underestimation of total cases of SBV infection.

The Institute of Tropical Medicine, Antwerp, found the virus in two out of 23 samples of midges captured outdoors in September and October 2011, confirming the role of biting midges in the transmission and spread of SBV.

The virus was also discovered last week in midges in Denmark which were captured during October 2011. Denmark has not reported *Schmallenberg virus* in ruminants so far.

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Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 13 March 2012

Thanks to an effective vaccine that has been available for the past 40 years, measles deaths fell dramatically worldwide between 2000 and 2008. However, measles is still endemic in many countries of Europe and due to low uptake of immunisation in the past decade the susceptible population has increased, leading to a resurgence of the disease. More than 30 000 cases were reported in EU Member States in the last two years.

To date, outbreaks or clusters were reported by 14 of the 29 reporting EU and EEA countries in 2012. The highest numbers were noted in Romania, France, Spain, Italy and the United Kingdom. In neighbouring Ukraine an ongoing major outbreak is of concern, with more than 5 200 cases reported so far in 2012.

➔Update of the week

No new outbreaks were detected in the EU during the period 10-16 March 2012.

Influenza - Multistate (Europe) - Monitoring 2011-2012 season

Opening date: 2 December 2011 Latest update: 8 March 2012

Following the 2009 pandemic, vaccine-preventable influenza transmission in Europe has returned to its seasonal epidemic pattern with peaks 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*. Week 10/2012 is the second consecutive week with a decrease in the proportion of positive sentinel samples. That and the reported national trends indicate that the peaks of the epidemics have passed in many, but not all, EU/EEA countries. The epidemics remain dominated by A(H3) viruses, but at this stage in the season B viruses are becoming more important.

➔Update of the week

During week 10/2012, medium or higher intensity has been reported by 20 countries, decreasing trends in ten countries and increasing trends in only three countries: Latvia, the Netherlands and Romania (compared with eleven countries having increasing trends in week 9). Thirteen countries reported stable trends.

Non EU Threats

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

Opening date: 15 June 2005 Latest update: 13 March 2012

The influenza A(H5N1) virus, commonly known as bird flu, is fatal to humans in about 60% of human infections, and sporadic cases continue to be reported, usually after contact with sick or dead poultry from some Asian and African countries. There are currently no indications from a human health perspective of significant changes in the epidemiology associated with any clade or strain of the A(H5N1) virus, and no human cases have been reported from Europe. 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.

➔Update of the week

During the period 10-16 March 2012, WHO acknowledged two new human cases of avian influenza A(H5N1): one in Indonesia (fatal) and one in Vietnam (still hospitalised).

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 15 March 2012

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. There are no important recent developments in global dengue epidemiology. However, the identification of sporadic autochthonous cases in non-endemic areas in 2010 and 2011 highlights the risk of occurrence of locally acquired cases in EU countries where the competent vectors are present.

➔Update of the week

There have been no reports of autochthonous dengue infections in Europe so far in 2012.

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Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 15 March 2012

Polio, a crippling and potentially fatal vaccine-preventable disease, 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, WHO reported 650 cases in 2011. Twenty-five cases have been reported in 2012 so far.

➔Update of the week

This week, three new polio cases with symptom onset in 2012 were reported to WHO.

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II. Detailed reports

Schmallenberg Virus - Multistate (Europe) - New virus in ruminants

Opening date: 20 December 2011 Latest update: 15 March 2012

Epidemiological summary

Since November 2011, *Schmallenberg virus* has been reported in cattle, sheep and goats in Germany, the Netherlands, Belgium, the United Kingdom, France, Luxembourg and Italy. On 13 March 2012, OIE reported detection of *Schmallenberg virus* on a sheep farm in Andalusia, Spain.

The information available on the *Schmallenberg virus* genome suggests that this virus is part of the Simbu serogroup of the *Bunyaviridae* family, genus *Orthobunyavirus*. Simbu serogroup viruses are primarily transmitted by insect vectors (midges, mosquitoes) although the routes of *Schmallenberg virus* transmission have not yet been confirmed. The potential for direct transmission from animal to animal is yet unknown.

As midges, and to a smaller extent mosquitoes, are believed to be the major routes of transmission, significant spread is unlikely during the winter period when these insects are usually inactive. Transmission could increase again during the 2012 vector season.

So far no human cases have been reported from the affected countries.

Web sources:
| OIE report Spain| Risk Assessment Netherlands |Dutch Central Veterinary Institute |
Veterinaerinstittutet Denmark |ECDC RRA

ECDC assessment

Despite the spread of the virus in ruminants, the ECDC preliminary risk assessment of the impact of the virus on human health remains unchanged: it is unlikely that the virus can cause disease in humans. To date, no specific morbidity has been observed among farmers and veterinarians. However, as other viruses in the same serogroup are known to be zoonotic and genetic reassortment among members within the *Orthobunyavirus* genus occurs, passive monitoring for clinical symptoms has been initiated among potentially exposed people.

Investigations and research projects are ongoing in the affected countries to better understand the epidemiological and the microbiological aspects of this outbreak among ruminants and humans, and to implement relevant preventive measures.

Public health authorities in the EU Member States have been alerted about this outbreak. The animal and human health authorities, both at national and EU levels, are closely collaborating to ensure rapid detection of any change in the epidemiology in animals and humans, particularly among people who have close contact with infected animals.
Farmers, veterinarians and other people who work with animals are advised to follow protective hygiene measures when working with livestock and abortion material. As a general precaution, as for any zoonotic agent, it is advised that pregnant women should not assist with lambing or kidding.

Actions

The Dutch and German authorities have produced a risk assessment that has been published by RIVM and the Ministry of Agriculture in the Netherlands.

ECDC has conducted a rapid risk assessment in consultation with Germany and the Netherlands regarding the potential risks to human health from *Schmallenberg virus.* It was published on the ECDC website on 23 December 2011. ECDC continues to monitor the situation closely.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 13 March 2012

Epidemiological summary

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EU Member States
No new oubreaks were detected. Hungary reported one imported case.

Neighbouring countries
Ukraine
The Ministry of Health reported 5 279 cases in 2012 as of 13 March 2012.

Web sources: ECDC Monthly Measles Monitoring 21 February 2011 | MedISys Measles Webpage |EUVAC-net ECDC | ECDC measles factsheet | ECDC RRA on the measles outbreak in Ukraine

ECDC assessment

A decline in the uptake of immunisation in the past decade in Europe has increased the susceptible population, and measles has re-emerged in the region. When the number of susceptible individuals increases, the incidence of measles increases as well, and the interval between epidemic peaks decreases.

Transmission follows the traditional seasonal pattern of measles. Last year's outbreaks in Europe peaked in May and declined over the rest of the year. The number of reported cases started to increase in some of the EU Member States (Romania and France) towards the end of 2011. To date, 14 countries have reported cases during 2012, indicating the start of the measles transmission season. However, the reported numbers so far this year are significantly lower than those reported for the corresponding period last year (584 reported measles cases in January 2012 compared with over 2 000 cases during the same month in 2011).

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 includes all EU Member States, have committed to eliminate 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.

Actions

In June 2012, Ukraine and Poland will host the UEFA European Championship with millions of visitors expected from several European countries. ECDC has prepared a rapid risk assessment to assess the risk of visitors to Ukraine becoming infected and subsequently importing and spreading measles within the EU on their return.

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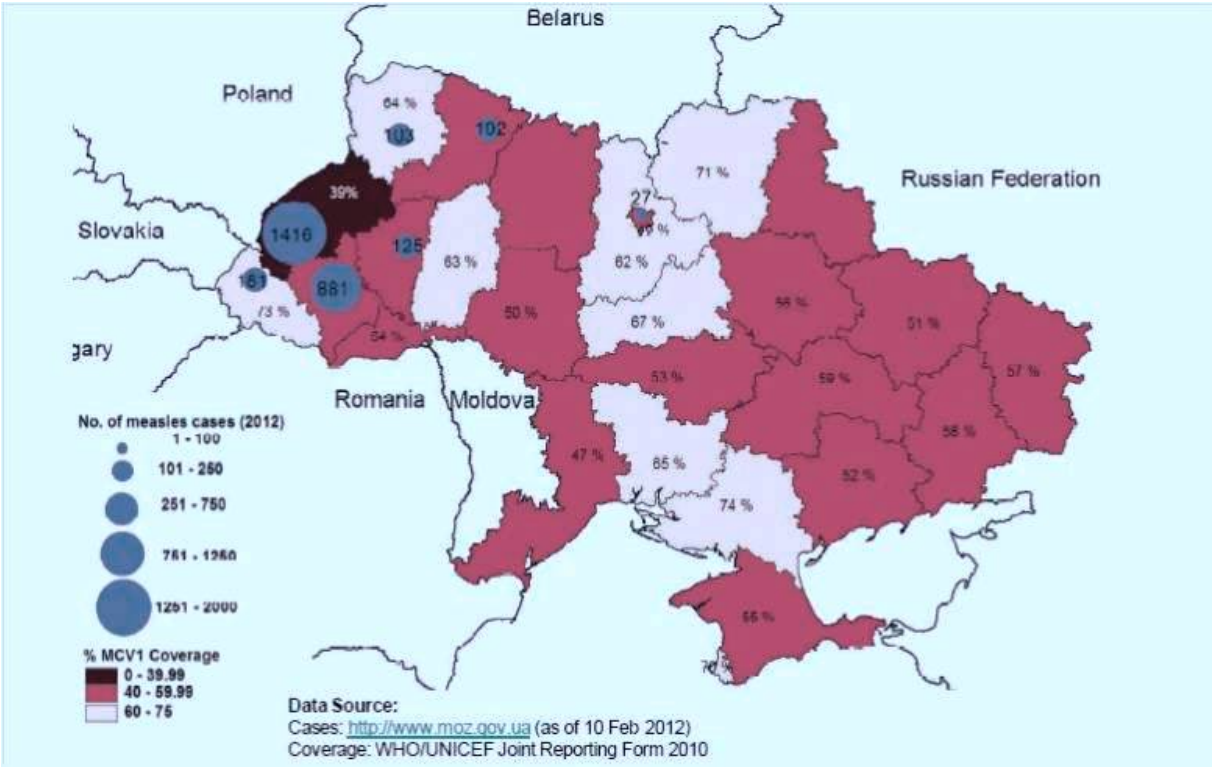
Measles cases in 2012 and MCV1 coverage in 2010 by Region, Ukraine

WHO



Influenza - Multistate (Europe) - Monitoring 2011-2012 season

Opening date: 2 December 2011 Latest update: 8 March 2012

Epidemiological summary

The 2011/2012 influenza season started late this season and has been without any clear geographic progression.

In week 10/2012, medium or higher intensity has been reported by 20 countries, decreasing trends in ten countries and increasing trends by only three countries: Latvia, the Netherlands and Romania (compared with eleven countries having increasing trends in week 9). Thirteen countries reported stable trends.

Of 1 433 sentinel specimens tested, 43.2% were positive for influenza virus. This is the second proper decline this year, suggesting that the peak of the epidemic, at European level, has passed. Of these sentinel viruses, 85.1% were type A and 14.9% were type B. This is the highest percentage for B viruses this season. Only six were A(H1)pdm09 (<1%).

Since week 40/2011, 1 238 cases of severe acute respiratory infection, including 51 fatalities, have been reported by seven countries. Of these cases, 873 were related to influenza infection; 97.4% with A viruses.

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No resistance to neuraminidase inhibitors (oseltamivir and zanamivir) has been reported so far this season.

This is the second consecutive week with a decrease in the proportion of positive sentinel samples. That and the reported national trends indicate that the peaks of the epidemics have passed in many, though not all, EU/EEA countries. The epidemics remain dominated by A(H3) viruses, but at this stage in the season B viruses are becoming more important.

Web source: ECDC Weekly Influenza Surveillance Overview

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

Opening date: 15 June 2005 Latest update: 13 March 2012

Epidemiological summary

During the period 10-16 March 2012, WHO confirmed two new human cases of avian influenza A(H5N1) virus infection: one case from Indonesia and one from Vietnam. The Indonesian case developed symptoms on 23 February and died on 1 March. The Vietnamese case fell ill on 29 February and has been in hospital since 4 March. Both cases had exposure to poultry.

Since 2003, 596 cases (including 350 deaths) have been notified in 15 countries. Of these, 18 (including 10 deaths) were notified in 2012.

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

ECDC assessment

The H5N1 virus is fatal to humans in about 60% of cases. Most human infections are the result of direct contact with infected birds, and the World Health Organization notes it has never identified a 'sustained human-to-human spread' of the virus since it re-emerged in 2003. Countries with large poultry populations in close contact with humans are considered to be most at risk of bird flu outbreaks. Hong Kong reported the world's first recorded major outbreak of bird flu among humans in 1997, when six people died.

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.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 15 March 2012

Epidemiological summary

Europe: There have been no autochthonous cases in 2011 or in 2012 to date.

Africa: No significant developments reported recently.

South Asia: No significant developments reported recently; sporadic cases reported in Punjab province (Pakistan) and several areas of India.

South-East Asia: The latest update from the WHO Western Pacific Regional Office reports relatively low and stable activity in the region; local outbreaks are currently reported mostly in Indonesia (North Jakarta) and the Philippines (Bataan). Hong Kong authorities reported several cases imported from Indonesia this week.

Pacific: There is no update about the significant increase in cases in East Timor. Fiji is reporting an ongoing outbreak in Lautoka, the second largest city in the country, with more than 20 recent cases. The limited outbreak affecting Niue is under control.

South America: According to The Brazilian Ministry of Health and the Pan American Health Organization, Rio de Janeiro is still reporting an increase in cases (predominantly DENV-4), however, the situation overall is under control. Several other countries in the Region are reporting local outbreaks, in particular Ecuador and Paraguay, where DENV-4 was reported for the first time. Several suspected cases are reported on the border between Argentina and Bolivia.

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Central America: El Salvador is still reporting several local outbreaks as well as Mexico, in particular in Tabasco and in other southern regions.

Caribbean: No major developments have been reported.

North America: No recent developments have been reported

Web sources:
DengueMap CDC/HealthMap| MedISys dengue| WHO dengue factsheet update 2012| ECDC dengue fever factsheet | PAHO Brazil press release|MoH Brazil summary 2012|

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. Local transmission of dengue was reported for the first time in France and Croatia in 2010 and imported cases were detected in other European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 15 March 2012

Epidemiological summary

The weekly WHO polio update of 15 March 2012 reports three new polio cases with disease onset in 2012: one case each in Afganistan, Nigeria and Pakistan. All three cases were WPV1.

Twenty-five cases with onset of disease in 2012 have been reported globally compared with 55 for the same period in 2011.

Web sources: Polio Eradication: weekly update | MedISys Poliomyelitis

ECDC assessment

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

The WHO European Region is polio-free. 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.

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