COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 18, 28 April-4 May 2013

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013 Latest update: 25 April 2013

Between 1 October 2012 and 2 May 2013, Denmark, Finland, Norway and Sweden reported 30 hepatitis A cases due to genotype 1b with three related sequences. None of the cases have travel history outside the EU within the period of their potential exposure. There are 45 additional non-travel-related cases of hepatitis A reported in the four countries for whom the sequence is not known. The source of the outbreak has not been identified but epidemiological investigations in the affected countries point towards frozen berries as vehicle of infection.

➔Update of the week

Three new confirmed cases and two associated cases were reported from the Member States involved since last week's report.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 2 May 2013

Measles, a highly transmissible vaccine-preventable disease, is still endemic in many countries of Europe due to a decrease in the uptake of immunisation. According to the latest enhanced measles surveillance data retrieved from the European Surveillance System (TESSY), the 30 contributing countries (29 EU and EEA countries and Croatia) reported 8 499 cases of measles during the last 12-month period from March 2012 to February 2013. There have been no measles-related deaths during the reporting period, but seven cases were complicated by acute measles encephalitis. During the last 12-month period France, Italy, Romania, Spain and the United Kingdom accounted for 94% of the measles cases. Measles is targeted for elimination in Europe by 2015. Sixteen countries met the elimination target of less than one case of measles per million population during the last 12 months.

➔Update of the week

During the last week, public health authorities reported on the ongoing outbreak in Wales. WHO released its vaccine-preventable diseases EpiBrief for the EURO region.

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Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 2 May 2013

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

Outbreaks were reported in Poland and Sweden.

Non EU Threats

Hepatitis A - Multistate - Travel to Egypt

Opening date: 22 April 2013 Latest update: 2 May 2013

From November 2012 to April 2013, several EU Members States reported hepatitis A virus (HAV) infections affecting travellers returning from Egypt. The identification of the same HAV sequence in 15 cases from three of the affected countries confirms a multinational outbreak. The source of infection is still unknown. On-going investigations will provide more information.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 2 May 2013

On 31 March 2013, the Chinese health authorities announced the identification of a novel avian influenza A(H7N9) virus in three seriously ill patients in Shanghai. The outbreak has since spread to Zhejiang (46), Shanghai (33), Jiangsu (27), Henan (4), Anhui (4), Beijing (1), Shandong (2),Fujian (3),Hunan (2),Jiangxi (5) and Taiwan (1). The source of infection and the mode of transmission are yet to be determined. Zoonotic transmission from poultry to humans is the most likely scenario. There is no epidemiological link between most of the cases and sustained human-to-human transmission has not been confirmed. There has been one cluster reported with two confirmed cases (husband and wife). This is the first time that possible human-to-human infection with avian influenza A(H7N9) virus has been identified.

➔Update of the week

Between 25 April and 02 May 2013, 16 additional confirmed human cases of influenza A(H7N9) virus, including three deaths, have been reported. Since the beginning of the outbreak there have been 128 confirmed cases, including 26 deaths.

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

Opening date: 15 June 2005 Latest update: 2 May 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 26 April 2013, WHO acknowledged six additional laboratory-confirmed human cases with influenza A(H5N1) virus infection. Two cases from Egypt who both died, two cases from Viet Nam and one case each from Bangladesh and Cambodia.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 2 May 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 a few sporadic cases still reported between week one and week nine in 2013. So far in 2013, no autochthonous dengue cases have been reported in other European countries.

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Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 2 May 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.

➔Update of the week

During the week leading up to 2 May 2013, two new polio cases were reported to WHO. The two cases are from Nigeria.

Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012 Latest update: 2 May 2013

From April 2012 to 2 May 2013, 24 laboratory-confirmed cases including 16 deaths from an acute respiratory disease caused by nCov have been notified. The new virus is genetically distinct from the coronavirus that caused the SARS outbreak. Cases have occurred in Saudi Arabia, Qatar, Jordan, United Arab Emirates and the United Kingdom. There have been three clusters of cases with evidence of human-to-human transmission, one in Jordan, one in Saudi Arabia and one in the United Kingdom, where the index case is believed to have been infected during a visit to Saudi Arabia. The reservoir of the novel coronavirus has not been established nor is it clear how transmission is sustained from one sporadic case to another.

➔Update of the week

On 1 May 2013, the Ministry of Health in Saudi Arabia reported seven new cases, five of which have been fatal. All fatal cases originated in Al-Ahsa governorate.

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II. Detailed reports

Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013 Latest update: 25 April 2013

Epidemiological summary

Between 1 October 2012 and 2 May 2013, Denmark, Finland, Norway and Sweden have reported 30 hepatitis A cases due to genotype 1b with with three related sequences. None of the cases have travel history outside the EU within the period of their potential exposure. There are 45 additional non-travel-related cases of hepatitis A reported in the four countries for whom the sequence is not known.

Epidemiological investigations in Denmark, Finland and Sweden revealed that all the patients had consumed berries, in particular frozen berries in smoothies. Strawberries were the food item with the strongest association with the disease. No hepatitis A virus (HAV) could be isolated from food samples so far. Food safety authorities and Public Health Authorities in the affected countries are actively collaborating to uncover the vehicle of infection and to prevent occurrences of additional cases. Case definition of confirmed cases has been changed and includes now "a probable case typed with HAV subgenotype IB and an RNA sequence less than 3% different from the "Danish outbreak strain" have been included as confirmed cases.

Following epidemiological investigations, the food authorities in all four countries recommended that citizens should boil frozen berries or berries of non-domestic origin before consumption.

Web sources: ECDC HAV factsheet | Eurosurveillance 25 April 2013

ECDC assessment

The identification of closely related HAV sequences in four different countries confirms that this is a multinational food-borne outbreak. The distribution of cases over time suggests a persistent source with possibly one or more vehicles of infections. As the most recent cases had onset in April 2013, the outbreak is most likely still on-going.

Actions

Swedish authorities have initiated a case-control study and questionnaires have been sent out to the controls.

In order to strengthen the information for source identification Danish authorities have done a product distribution analysis and shared it with food authorities in the four countries.

ECDC and EFSA published a joint rapid outbreak assessment on 16 April.

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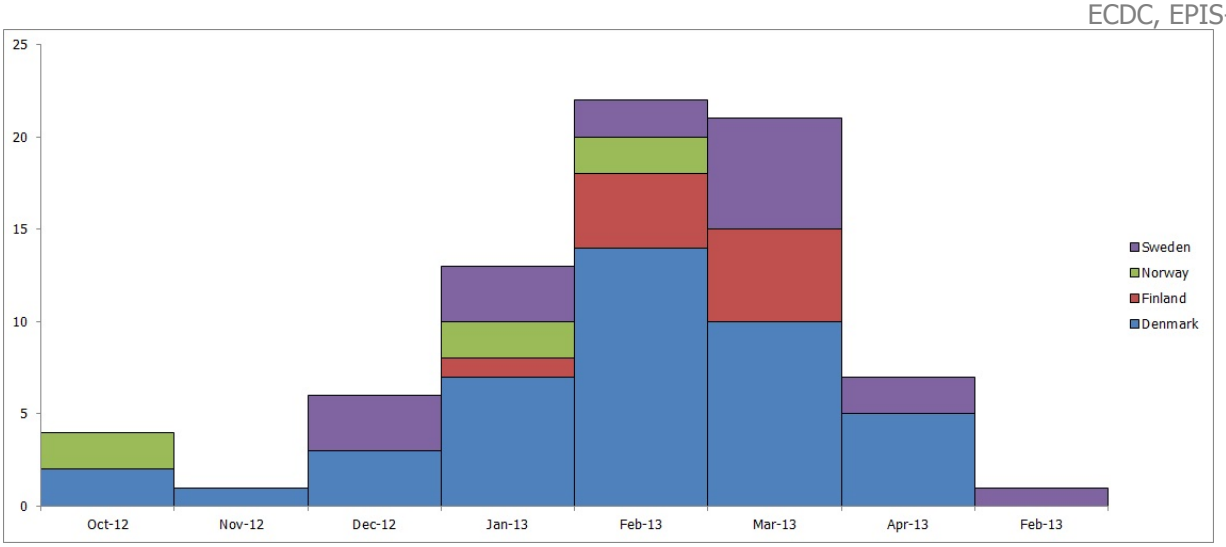
The number of cases of HaV associated with this outbreak by month, October 2012 - April 2013

ECDC, EPIS-FWD



Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 2 May 2013

Epidemiological summary

WHO Euro released the "WHO EpiBrief" providing an epidemiological assessment of selected vaccine-preventable diseases in the EURO region. Notably, large outbreaks are ongoing in Turkey and Ukraine.

PH Wales reported 503 measles cases in April, bringing the total number of notified cases in the outbreak affecting Wales since Nov 2012 to 1011.

PH England, NHS England and DoH UK announced on 25 April a nationwide catch-up campaign targeting 300 000 unvaccinated and 300 000 partially vaccinated 10-16 year children and teenagers.

UNICEF and partners have stepped up immunisation campaigns against measles, after reports of measles outbreaks in refugee camps in Iraq, Lebanon, Jordan and Turkey.

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

ECDC assessment

There was a significant reduction in notified cases in 2012 compared to the two previous years indicating that the incidence at EU/EEA level was back at the level before the 2010–2011 outbreaks. However, this is just one single annual incidence figure and does not signify a longer-term downward trend in measles notifications. Endemic measles transmission continues in a number of EU countries and the risk of new outbreaks increases as the unvaccinated population grows over time. In endemic areas, measles incidence fluctuates in multi-annual cycles which are determined by the vaccination uptake over time and the size of the susceptible population.

Actions

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. ECDC closely monitors measles transmission and outbreaks in the EU and neighbouring countries in Europe through enhanced surveillance and epidemic intelligence activities.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 2 May 2013

Epidemiological summary

WHO EpiBrief reports an ongoing transmission of rubella in the European region, with more than 4 500 cases reported in 2013, primarily from Poland. The Swedish Public Health Authority report the highest number of rubella notification in 23 years in 2012 (50 cases).

The 26 EU and EEA countries contributing to enhanced rubella surveillance together reported 21 549 cases during the last 12 -month period from March 2012 to February 2013. Poland and Romania accounted for 99% of all reported rubella cases in the 12 -month period. Since August 2012, Poland alone contributed over 90% of cases, due to the decreasing trend in Romania.

Web sources: ECDC measles and rubella monitoring | WHO epidemiological brief summary tables | WHO epidemiological briefs | 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. 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 in EU countries are of serious 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.

Hepatitis A - Multistate - Travel to Egypt

Opening date: 22 April 2013 Latest update: 2 May 2013

Epidemiological summary

Fifteen EU/EEA countries have reported 104 cases with hepatitis A infections among travellers returning from Egypt. Of these, 15 cases share an identical RNA sequence. The dates of onset of symptoms (or laboratory testing date for those with no available

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onset dates) were between 1 November 2012 and 17 April 2013. Interviewed cases reported having travelled to at least three different locations in the Red Sea region (Sharm-El-Sheikh, Hurghada and Marsa Alam) and stayed at several hotels and resorts.

Web source: ECDC rapid risk assessment | Eurosurveillance 25 April 2013

ECDC assessment

HAV infections in travellers returning from Egypt have been reported in several EU Member States. The same HAV sequence was identified in cases from the Netherlands, Norway and the UK confirming a multinational outbreak. The distribution of cases over time suggests a persistent source outbreak - potentially food borne - the source of which has not yet been identified.

Actions

ECDC has published a rapid risk assessment. Public health authorities in the affected countries, ECDC and WHO are actively collaborating to detect the source of the infection in order to prevent the occurrence of additional cases.

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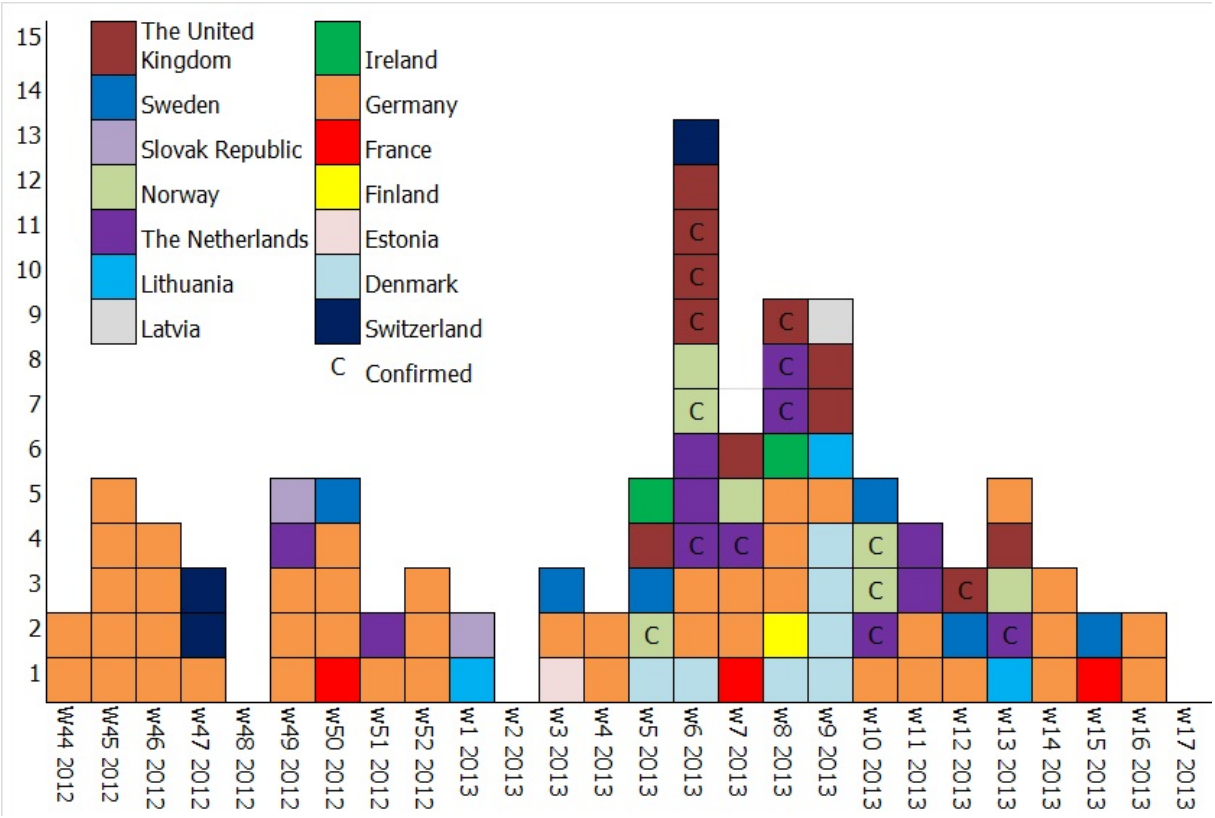
Distribution of probable and confirmed cases of hepatitis A virus by country and week of onset, 1 November 2012 - 30 April 2013 (n=101, date of onset missing for three)

ECDC



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Distribution of reported hepatitis A virus infections with travel history to Egypt by confirmation status and reporting country, 1 November 2012 – 30 April 2013

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Reporting country	Probable cases	Confirmed cases	Total
Denmark	7	0	7
Estonia	1	0	1
Finland	2	0	2
France	5	0	5
Germany	43	0	43
Ireland	2	0	2
Latvia	1	0	1
Lithuania	3	0	3
Norway	3	4	7
Slovak Republic	2	0	2
Sweden	6	0	6
Switzerland	3	0	3
The Netherlands	5	6	11
The United Kingdom (England)	6	5	11
Total	**89**	**15**	**104**

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 2 May 2013

Epidemiological summary

The influenza A viruses from the first three cases were non-subtypeable and were sent to the WHO Influenza Collaborating Centre at the Chinese Centre for Disease Control and Prevention (CCDC). The genetic comparison indicated that these cases were caused by a novel reassortant avian influenza virus with avian origin genes from both A(H7N9) and A(H9N2). No similar viruses have been seen before and A(H7N9) differs from A(H7) and A(H9) viruses that have been seen previously in Europe. No vaccine is currently available for this subtype of the influenza virus. Preliminary test results suggest that the virus is susceptible to the neuraminidase inhibitors (oseltamivir and zanamivir).

Since 31 March 2013, 128 cases of human infection with influenza A(H7N9) have been reported from eastern China and Taiwan: Zhejiang (46), Shanghai (33), Jiangsu (27), Henan (4), Anhui (4), Beijing (1), Shandong (2),Fujian (3),Hunan (2),Jiangxi (5) and Taiwan (1). In addition, the virus has been detected in one asymptomatic case in Beijing. Onset of disease has been between 19 February and 27 April 2013. The date of disease onset is currently unknown for fifteen patients. Most cases have developed

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severe respiratory disease. Twenty six patients have died (case-fatality ratio=20%). The median age is 61 years with a range between four and 91 years; 36 of 128 patients are female.

The Chinese health authorities are responding to this public health event with enhanced surveillance, epidemiological and laboratory investigation and contact tracing. The animal health sector has intensified investigations into the possible sources and reservoirs of the virus. The authorities reported to the World Organisation for Animal Health (OIE) that avian influenza A(H7N9) was detected in samples from pigeons, chickens and ducks, and in environmental samples from live bird markets ('wet markets') in Shanghai, Jiangsu, Anhui and Zhejiang provinces. Authorities have closed markets and culled poultry in affected areas.

Web sources: Chinese CDC | WHO | WHO FAQ page | Centre for Health Protection Hong Kong | OIE | Chinese MOA |

ECDC assessment

The source and mode of transmission have not been confirmed. The outbreak is caused by a reassortant avian influenza virus with low pathogenicity for birds, hence it does not cause the signal 'die-offs' in poultry associated with highly pathogenic strains of avian influenza viruses. Genetic analyses of the isolates have shown changes which suggest that the H7N9 virus may have greater ability to infect mammalian species, including humans, than most other avian influenza viruses. Pathogenicity for humans appears to be high and higher age appears to be a risk factor for disease.

The most likely scenario is that of A(H7N9) spreading undetected in poultry populations and occasionally infecting humans who have close contact with poultry or poultry products but this will have to be validated as further data become available.

At this time there is no evidence of any human-to-human transmission. Nearly 2 000 close contacts of confirmed cases are reported to have been followed up without evidence of person-to-person transmission.

There are three family cluster with four confirmed cases for which human-to-human transmission cannot be ruled out but where common exposure is the most likely explanation. An increasing incidence of sporadic cases and expansion of geographic spread in China and possibly neighbouring countries is expected over the coming weeks. Individual imported human cases to Europe cannot be ruled out and EU Member States need to prepare for detecting and diagnosing such cases. Critical developments that would change this assessment would be evidence of sustained human-to-human transmission and detection of avian influenza A(H7N9) in bird populations in Europe.

Actions

ECDC is closely monitoring developments and is continuously re-assessing the situation in collaboration with WHO, the US CDC, the Chinese CDC and other partners.

This epidemiological update does not change the conclusions and recommendations of the updated rapid risk assessment published on 12 April 2013. ECDC has published an epidemiological update on A(H7N9) on 29 April.

A case detection algorithm and an EU case definition has been developed and shared with EU Member states. The documents will also be published on the ECDC website in the coming days.

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

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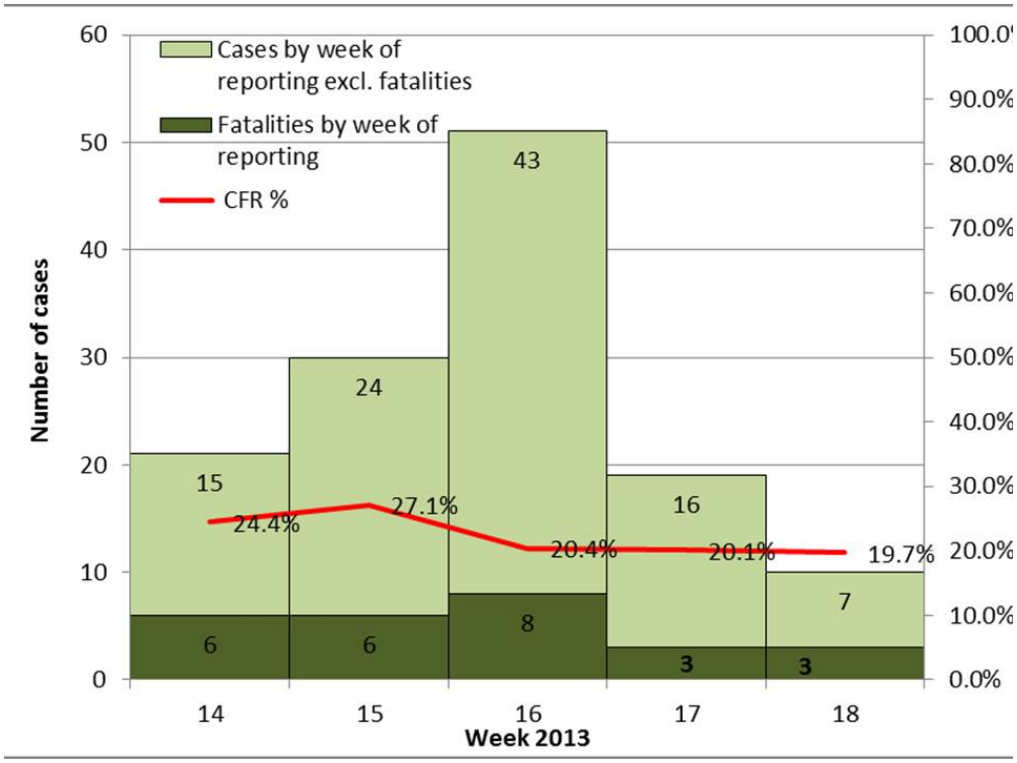
Distribution of influenza A(H7N9) cases by week of reporting, as of 01 May 2013 (128 cases, of which 26 fatalities)

ECDC



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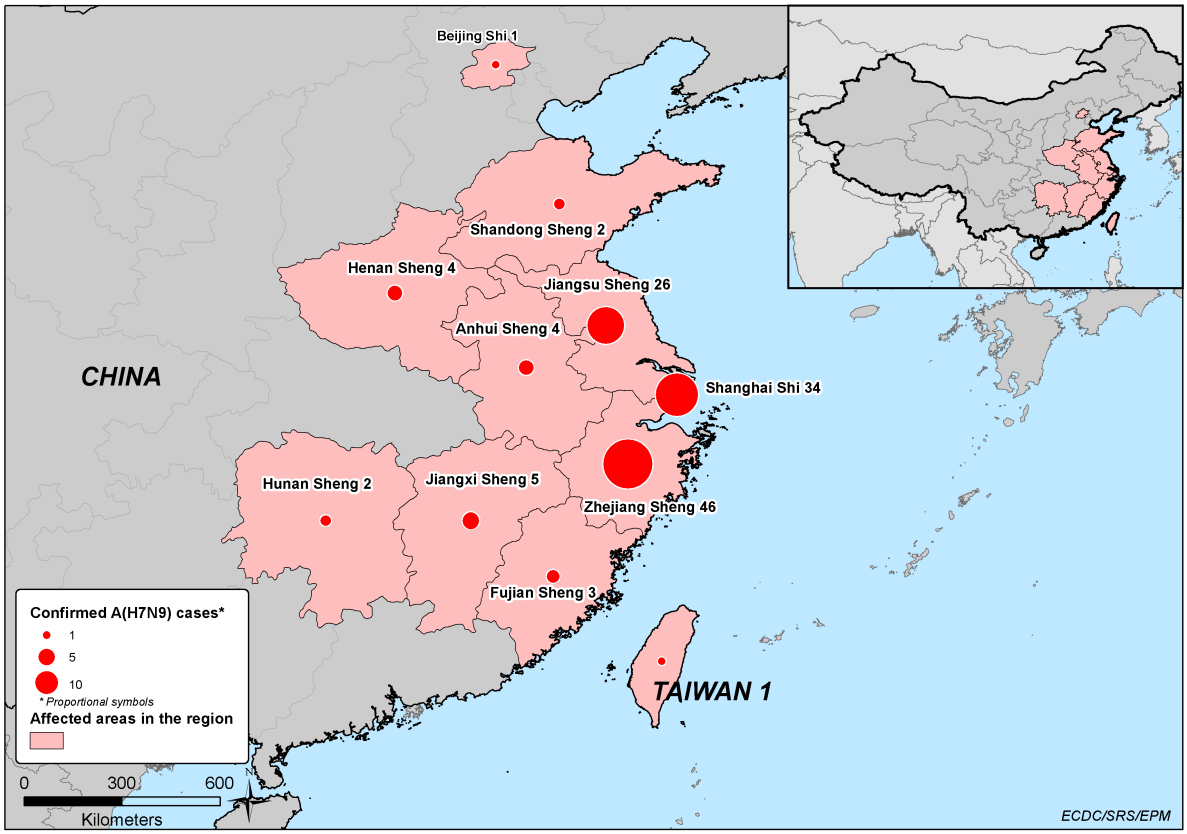
Distribution of cumulative number of influenza A(H7N9) cases,19 February-01 May 2013

ECDC



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

Opening date: 15 June 2005 Latest update: 2 May 2013

Epidemiological summary

The latest WHO update on 26 April 2013 acknowledged six additional laboratory-confirmed human cases with influenza A(H5N1) virus infection from Bangladesh (one), Cambodia (one), Egypt (two) and Viet Nam (two). The two cases from Egypt both died. The investigations into these cases concluded that they were sporadic cases and that the appearance of sporadic cases is expected and likely to occur in the future.

Since the beginning of 2013, Cambodia has reported ten human cases with influenza A(H5N1) virus infection including eight fatal cases. These cases come from five provinces all located in southern Cambodia. These cases do not seem have a direct epidemiological link and most had contact with sick poultry in their villages. The clade 1.1 viruses that have been isolated from cases are very similar to those isolated from poultry in the region. Investigations around these cases did not detect additional cases. This evidence suggests sporadic infections from exposure to infected poultry or contaminated environments, rather than human-to-human transmission. It has been suggested that the A(H5N1) virus is circulating endemically in poultry in

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Cambodia and so additional sporadic human cases might be expected.

From 2003 through to 26 April 2013, 628 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries, of which 374 have died.

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

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.

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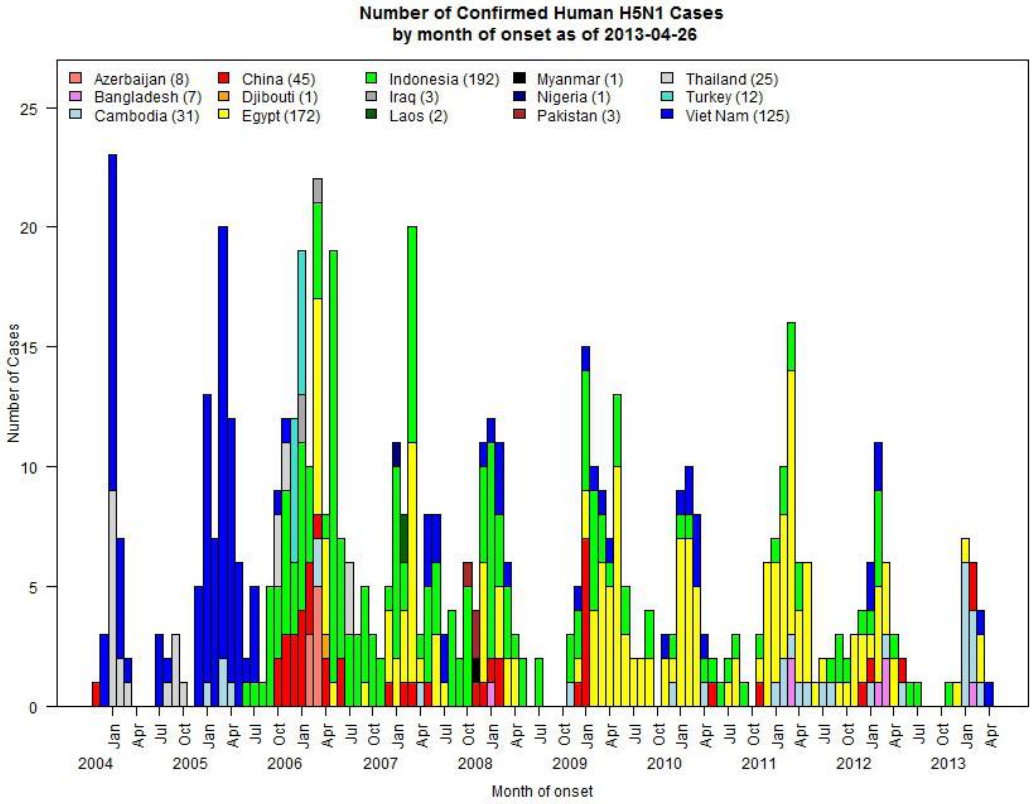
Number of avian influenza A(H5N1) cases in humans by country and month of onset

Source: WHO



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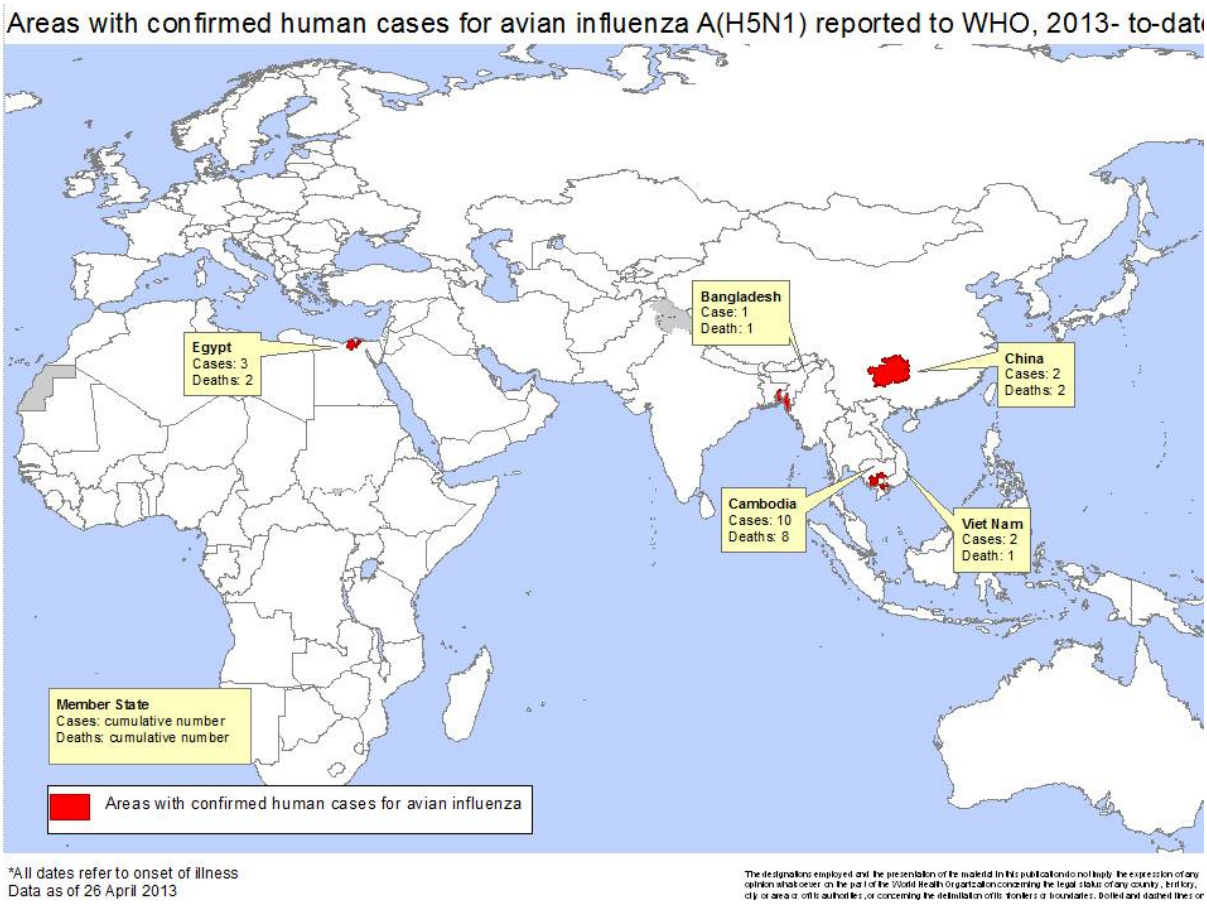
Distribution of avian influenza A(H5N1) cases in humans by country in 2013

Source: WHO



Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 2 May 2013

Epidemiological summary

Europe: The Portuguese Directorate-General of Health (DGS) has issued a statement warning travellers to Angola to take appropriate preventive measures due to the on-going dengue outbreak in Luanda province. In addition, DGS is advising people who have recently travelled to Angola to be aware of any possible symptoms that could be suggestive of dengue fever infection.

Asia: The number of dengue cases continues to rise in Singapore with 539 cases reported in the last week. Up to 27 April, the number of dengue cases is now more than 5 300 which exceeds the total number of cases reported during the whole of last year. The National Environmental Agency in Singapore has confirmed that DENV-1, DENV-2 and DENV-3 have all been circulating since the start of the year, with DENV-1 now replacing DENV-2 as the predominant serotype.

The Caribbean: The Ministry of Health in Jamaica is preparing a detailed prevention and control programme to avoid a possible dengue fever outbreak during the upcoming rainy season.

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Central and South America: El Salvador and Honduras are both seeing a spike in dengue activity. High dengue activity is reported across most states of Brazil whilst Colombia, Ecuador, Peru and Venezuela all report increasing levels. According to the Paraguayan Ministry of Health, the dengue epidemic in Paraguay has reached historic levels with more than 70 000 cases reported so far this year. This is approximately four times higher than the same time period last year.

Pacific: New Caledonia has reported an increasing trend of dengue cases in the last week. As of 25 April 2013, more than 8 200 cases and three deaths have been recorded since the outbreak started in September 2012. The Solomon Islands continues to see increasing levels.

Africa: In addition to the dengue outbreak in Angola, a dengue outbreak has been reported in Mombasa, Kenya. As of 26 April, 83 out of 148 blood samples collected from Mombasas residents tested positive for dengue virus by RT-PCR. The predominant serotypes are DENV-1 (69 per cent) and DENV-2 (28 per cent). The age range of confirmed cases was 12-56 years. No dengue associated deaths have been reported to date.

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

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 2012 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.
Of specific concern this week is the potential for imported cases from Angola and Kenya.

Actions

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

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 2 May 2013

Epidemiological summary

During the past week, two new polio cases were reported to WHO, both are WPV1. The two cases were from Nigeria.

Globally, 24 cases of polio have been reported so far in 2013 compared with 52 for the same period in 2012.

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

ECDC assessment

The last polio cases in the European Union occurred in 2001 when three young Bulgarian children of Roma ethnicity developed flaccid paralysis caused by 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.

Actions

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.

European Centre for Disease Prevention and Control (ECDC)
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Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012 Latest update: 2 May 2013

Epidemiological summary

The first described case of novel coronavirus infection was a 60-year-old male resident of Saudi Arabia who died from severe pneumonia complicated by renal failure in June 2012. A previously unknown coronavirus isolated from this patient was identified and named Human Coronavirus-Erasmus Medical Centre (HCoV-EMC/2012). In September 2012, a second case was reported, a Qatari man, who was transferred for care to Europe. In November 2012, additional cases with similar symptomatology were diagnosed in Qatar and Saudi Arabia. These included a family cluster of three confirmed and one probable case. Subsequently, two fatal cases were confirmed retrospectively by testing stored samples from a cluster of 11 cases of lower respiratory infection linked to a hospital in Jordan in April 2012.

In February 2013, a cluster of novel coronavirus cases was reported from the United Kingdom where the index case had travelled to Pakistan and Saudi Arabia ten days before symptom onset and where contact tracing identified two secondary cases among family members without recent travel. One person died and the other had a self-limiting influenza-like illness which did not require hospitalisation. Three additional sporadic cases have been reported since February, all from Saudi Arabia and fatal.

On 25 March Robert Koch Institute (RKI), Germany, reported the second imported case from the country. The patient, a 73 year old male with underlying clinical conditions, had been hospitalised in the United Arab Emirates and transferred to a hospital in Germany (Munich) for specific clinical care where subsequent diagnosis of nCoV infection was confirmed. The patient died on 26 March.

On 1 May, the Ministry of Health in Saudi Arabia reported seven recent cases, five of whom fatal. All fatal cases were from the eastern Al Ahsa governorate.

This brings the number of cases to 24 globally, including 16 deaths.

Web sources: WHO | ECDC RRA 19 February | ECDC novel coronavirus website | RKI risk assessment 26 March | WHO update 2 May

ECDC assessment

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

The cluster of three cases in the UK is evidence of limited human-to-human transmission. However, several hundred contacts of the UK cluster and the case treated in Germany have now been actively followed up without evidence of novel coronavirus infection indicating that the risk of transmission remains low.
These new cases reported on 1 May do not change ECDC risk assessment.

Actions

ECDC updated its rapid risk assessment, and published an epi-update on 27 March (Epidemiological update ECDC). The results of an ECDC coordinated survey on laboratory capacity for testing for the novel coronavirus in Europe were published in EuroSurveillance. On 18 March, WHO posted interim surveillance recommendations for human infection with novel coronavirus on their website.

ECDC is closely monitoring the situation in collaboration with WHO and the European Union Member States.

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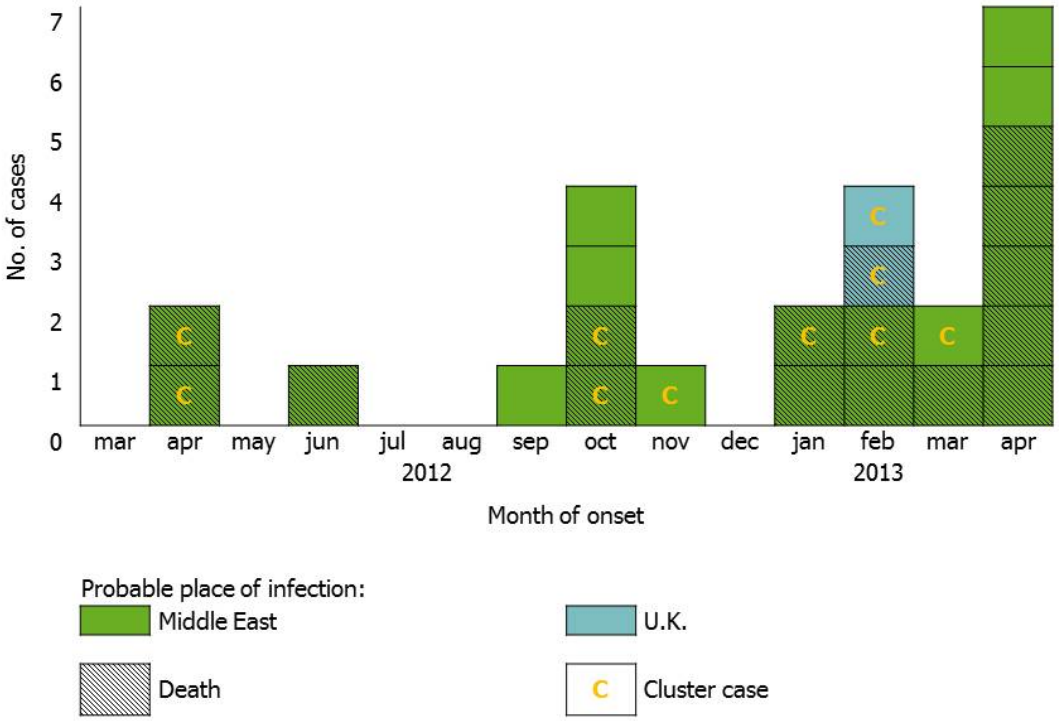
Number of cases of novel coronavirus infection by place of infection, outcome and month, March 2012- April 2013

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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