RAPID RISK ASSESSMENT

Outbreak of Ebola haemorrhagic fever in Uganda

2 August 2012

Main conclusions and recommendations

An outbreak of Ebola haemorrhagic fever is currently ongoing in Uganda with 38 cases reported, including 16 deaths. Two similar outbreaks have been seen in the past in Uganda. Through these, Uganda has developed a solid experience in dealing with such outbreaks, with the support currently of the World Health Organization, the US Centers for Disease Control and Prevention, and specialised non-governmental organisations.

As the incubation period can be up to three weeks, it is likely that additional cases will be identified in the coming weeks. However, control measures currently implemented in Uganda with the support of international partners, such as isolation of cases and active monitoring of contacts, should prevent further spread of the disease.

It is unlikely, but not impossible, that travellers infected in Uganda could arrive in the EU while incubating the disease and develop symptoms while in the EU. However, such cases should seek medical attention and be isolated, therefore preventing further transmission.

EU citizens in Uganda are not at risk of becoming infected unless they are in direct contact with bodily fluids of dead or living infected persons or animals. Avoiding such contact would effectively mitigate this risk.

Public health issue

To assess the risk at EU level associated with the current Ebola haemorrhagic fever outbreak in Uganda.

Source and date of request

ECDC internal decision on 1 August 2012.

Consulted experts

ECDC experts.

Disease background information

Infection with Ebola viruses originating from Africa causes severe disease in humans. The onset of symptoms is sudden and includes fever, muscle aches, weakness, headache and sore throat. The next stage is characterised by vomiting, diarrhoea, rash and malfunction of liver and kidneys. Some cases present with profuse internal and external bleeding.

In a final stage patients are affected by multi-organ failure.

The incubation period varies from 2 to 21 days. The mortality rate for sick individuals is estimated to be between 50% and 90%.

There are no specific prophylactic (vaccine) or therapeutic (antiviral drugs) options available.

Ebola viruses are highly transmissible by direct contact with blood, secretions, organs or other bodily fluids of dead or living infected persons. Transmission through sexual contact can occur up to seven weeks after clinical recovery [1]. Transmission can also occur by contact with dead or living infected animals (e.g. monkeys, chimpanzees, forest antelopes and bats) [2]. Airborne transmission (as in measles or smallpox) has never been documented.

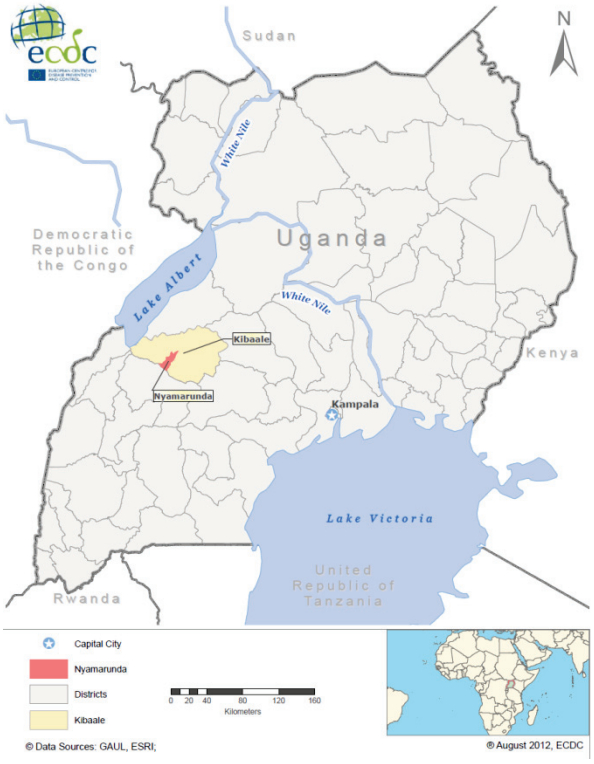
A review of the literature indicated a low risk of transmission in the early phase of symptomatic patients, even with high-risk exposure. Risk of transmission may increase with transition to later stages of the disease with increasing viral titres [3]. In a household study, secondary transmission only took place if direct contact occurred. No transmission was reported without direct physical contact [4]. In an outbreak in 2000 in Uganda, the most important risk factor was direct repeated contact with a sick person's bodily fluids during the provision of care. The risk was higher when exposure took place during the late stages of the disease. Simple physical contact with a sick person appeared not to be sufficient for contracting Ebola infection. Transmission through heavily contaminated fomites is apparently possible [5].

In summary, physical contact with bodily fluids seems necessary for transmission, especially in the early stages of disease while in the later stages contact with heavily contaminated fomites might also be a risk for transmission.

Nosocomial transmission can occur. Healthcare workers can become infected through close contact with infected patients. The risk for infection can be significantly reduced through the appropriate use of infection control precautions and adequate barrier procedures [2].

Event background information

On 24 July 2012, the Ministry of Health of Uganda notified WHO of an outbreak of Ebola haemorrhagic fever from Kibaale district, mid-western Uganda [6]. The first case belonged to a family in Nyanswiga village in Nyamarunda sub-county in Kibaale district. As of 31 July 2012, 38 cases, including 16 deaths, have been reported. Laboratory investigations conducted at the Uganda Virus Research Institute (UVRI), Entebbe, Uganda, confirmed Ebola virus, subtype Sudan [7].



The main affected area is the Kibaale district, a forested area about 200 kilometres west of the Ugandan capital, Kampala, and near the border with the Democratic Republic of the Congo. In Kampala, the Ugandan Ministry of Health has confirmed one case, a healthcare worker in Kibaale district, who was treated in the hospital and who subsequently died.

According to WHO, the Ugandan Ministry of Health has activated the National Task Force to review progress and provide daily media briefs and the Kibaale district Ebola Task Force to coordinate the field response. The neighbouring districts have been put on high alert and are enhancing surveillance [7].

A team of experts from the Ministry of Health, WHO, US Centers for Disease Control and Prevention (CDC), Médecins Sans Frontières (MSF) Spain, MSF Holland and the Red Cross are in Kibaale to support the response operations. Contacts exposed to suspected, probable and confirmed cases are being identified for active follow-up.

Kibaale hospital has established an isolation ward for suspected, probable and confirmed cases. Currently, there are 18 admitted cases on the isolation ward. MSF

Holland has mobilised resources for setting up an isolation centre at the hospital. Although the Ministry of Health and Mulago National Referral Hospital have mobilised some staff to manage the isolation centre, more are urgently needed.

Media attention for haemorrhagic fever outbreaks is usually particularly high and increases the risk perception. The media in Uganda are currently reporting additional cases for some other Ugandan districts [8], while the media in Kenya have reported a suspected case having travelled from Sudan through Uganda to seek medical attention in Kenya, presenting with signs of haemorrhagic fever [9]. However, this information should be considered with caution as it has not been confirmed by official sources.

Control activities already in place are active case finding and contact tracing, enhanced surveillance and reinforcing infection control practices, case management and social mobilisation.

ECDC threat assessment for the EU

Uganda has experienced two outbreaks of Ebola haemorrhagic fever in the past, one in 2000–2001 in Gulu, Mbarara, and Masindi Districts, and the second one in Bundibugyo District in 2007–2008. These outbreaks involved more than 500 cases and caused around 250 deaths. Therefore, the emergence of an outbreak of Ebola haemorrhagic fever in Uganda is not unexpected.

The epidemiological features of this outbreak are consistent with previous outbreaks of Ebola fever involving the Sudan Ebola virus subtype.

It is likely that more cases will be identified in the coming weeks, as active case-finding and contact monitoring is in place, and given the duration of the incubation period of up to three weeks.

Risk of patients developing symptoms while in the EU

The risk that patients will develop symptoms of Ebola haemorrhagic fever while in the EU can be assessed as follows.

Tourists returning from Uganda

The risk that tourists having visited Uganda have been infected and will develop symptoms while back in the EU is extremely low, even if they visited the district of Kibaale, as transmission can only occur in the context of direct contact with blood, secretions, organs or other bodily fluids of dead or living infected persons or animals. Returning visitors from tropical countries that develop infectious disease symptoms such as fever, headache or general malaise within three weeks after return should always seek rapid medical attention and mention their recent travel to the attending physician.

Visiting families and friends

The risk for travellers visiting friends and relatives is equally low, unless they have been in close physical contact with sick or dead persons or animals. In such case, the active contact tracing implemented by Ugandan authorities would be effective to identify such exposure and to prevent further spread of the disease through active contact monitoring.

Exposed persons seeking medical attention in the EU

There is a possibility that persons knowing or suspecting that they have been exposed to a patient might seek medical attention in the EU while potentially incubating the disease. This can be the case, for example, of EU volunteers working in healthcare settings in the affected district. In such a situation, these persons are likely to seek immediate medical attention, and could therefore be dealt with so as to prevent any further spread, should they develop symptoms.

Patients presenting symptoms and seeking medical attention in the EU

There is a possibility that a person having been exposed and starting developing symptoms would use a commercial flight to seek medical attention in the EU. Such patients would certainly seek immediate medical attention upon arriving in the EU and be isolated to prevent further transmission. Regarding the risk for co-passengers in the commercial flight, ECDC published a guidance document stressing the very low level of risk in such a situation [10].

WHO does not recommend that any travel or trade restrictions be applied to Uganda [7]).

Risk for EU residents in Uganda

The risk for EU residents in Kampala or in Uganda is extremely low, unless they would be directly exposed to body fluids of dead or living infected persons or animals. Avoiding such contact is an appropriate precautionary measure in this context.

The risk of acquiring the disease through exposure with contaminated fluids or equipment in healthcare settings in Uganda would be very low if suspected, probable and confirmed cases are dealt with in isolation wards with appropriate levels of precaution.

There is a specific risk for healthcare workers, especially if involved in caring for Ebola haemorrhagic fever patients (e.g. volunteers). However, the level of precaution taken in such settings should effectively prevent the transmission of the disease.

There is a risk of transmission through unprotected sexual contact with a patient that has recently recovered from the disease.

Conclusions

An outbreak of Ebola haemorrhagic fever is currently ongoing in Uganda with 38 cases reported, including 16 deaths. Two similar outbreaks have been seen in the past in Uganda. Through these, Uganda has developed a solid experience in dealing with such outbreaks, and in the current situation has the support of the World Health Organization, the US Centers for Disease Control and Prevention, and specialised non-governmental organisations.

As the incubation period can be up to three weeks, it is likely that additional cases will be identified in the coming weeks in Uganda. However, control measures, such as isolation of cases and active monitoring of contacts, currently implemented in Uganda with the support of international partners should prevent further spread of the disease.

It is unlikely, but not impossible, that travellers infected in Uganda could arrive in the EU while incubating the disease and develop symptoms while in the EU. These cases should seek medical attention and be isolated, preventing further transmission.

EU citizens in Uganda are not at risk of becoming infected unless they are in direct contact with bodily fluids of dead or living infected persons or animals. Avoiding such contact would effectively mitigate this risk.

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