

# Ebola virus disease outbreak in North Kivu, Democratic Republic of the Congo, 2021

22 February 2021

## Summary

On 7 February 2021, an Ebola virus disease (EVD) outbreak was declared by the Ministry of Health of the Democratic Republic of the Congo (DRC), in the North Kivu province in the eastern part of the country. As of 18 February 2021, four confirmed cases of EVD, including two deaths, have been reported in the Biena and Katwa health zones. The first known case of EVD of this current outbreak died on 4 February. Laboratory testing confirmed infection with Ebola virus.

North Kivu Provincial health authorities are currently leading the response, supported by the World Health Organization (WHO) and the DRC Ministry of Health. So far more than 300 contacts have been identified and a vaccination campaign was started on 15 February 2021.

These EVD cases are the first cases of the disease reported in North Kivu, DRC, since the tenth outbreak was declared over in June 2020. The ongoing outbreak may spread to other areas within DRC and/or in neighbouring countries.

## Risk assessed

Overall, the current risk for European Union/European Economic Area EU/EEA citizens living in or travelling to affected areas in DRC is considered low, as while disease in unvaccinated people is severe and most EU/EEA citizens are not commonly vaccinated against the disease, there is a very low likelihood of infection of EU/EEA citizens in the DRC. The current risk for citizens in the EU/EEA is considered very low, as the likelihood of introduction and secondary transmission within the EU/EEA is very low.

## Options for response

EU/EEA visitors and residents in affected areas in DRC should apply the following precautionary measures:

- avoid contact with symptomatic patients/their bodily fluids, and bodies and/or bodily fluids from deceased patients;
- avoid consumption of bush meat and contact with wild animals, both alive and dead;
- wash and peel fruit and vegetables before consumption;
- wash hands regularly using soap or antiseptics;
- ensure safe sexual practices.

Significant developments for the prevention of EVD have been made, with two vaccines (Ervebo and Zabdeno/Mvabea) now licensed for use in several countries, including in the EU. DRC has approved the Ervebo vaccine.

Screening of travellers returning from DRC is not justified at this stage.

## Event background

On 7 February 2021, an Ebola virus disease (EVD) outbreak was declared by the Ministry of Health of the Democratic Republic of the Congo (DRC), in the North Kivu province in the eastern part of the country [1]. This province was recently affected by the largest outbreak of EVD ever recorded in DRC [2]. That tenth EVD outbreak occurred in the eastern part of the country from August 2018 until 25 June 2020, affecting the Kivu and Ituri provinces, where these most recent cases have been detected, and resulted in 3 470 cases, including 2 287 deaths [3].

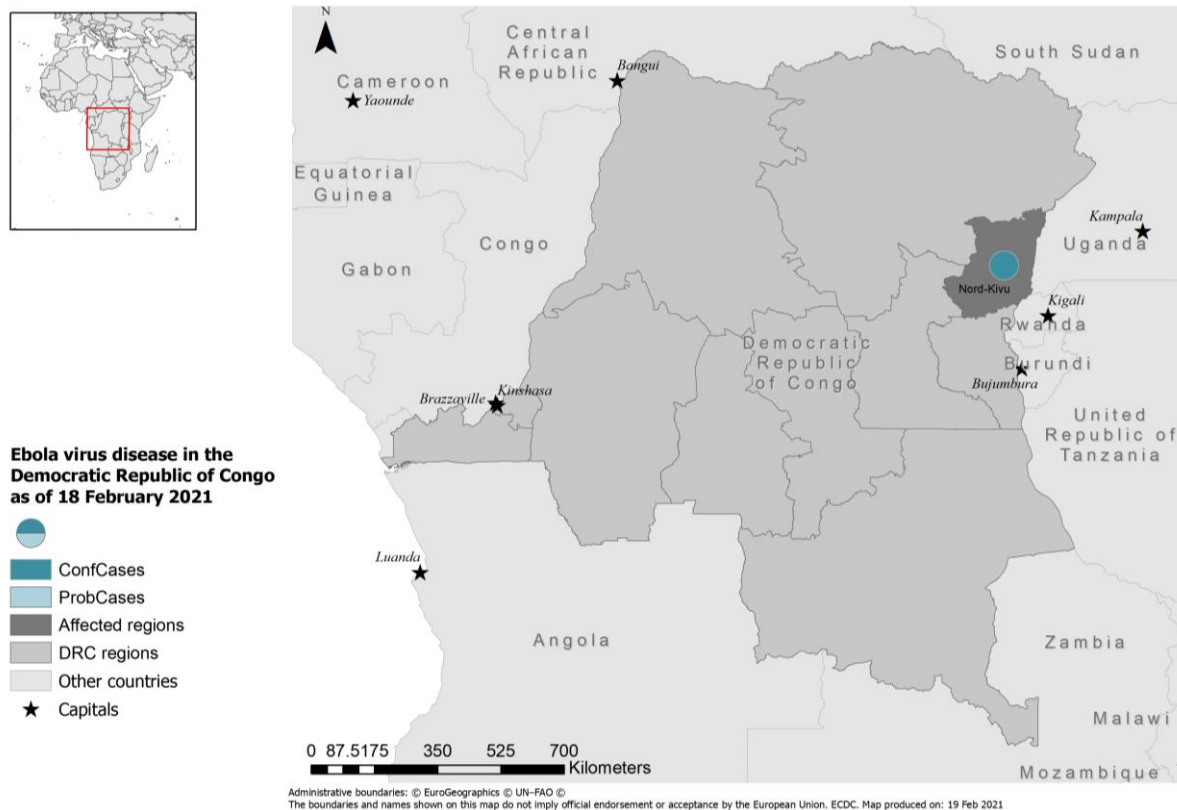
Since the beginning of this outbreak and as of 18 February 2021, four confirmed cases of EVD, including two deaths, have been reported in the North Kivu province, in two health zones: Biena (two cases) and Katwa (two cases) [4,5]. Additionally, media sources quoting health authorities report of two further cases detected on 18 February 2021, in the Katwa and Mangurudjipa health zones [6].

The first confirmed case of EVD was in a patient who sought treatment for Ebola-like symptoms at two healthcare facilities between the 25 January and 3 February in the Biena health zone. On 3 February she was referred to a Hospital in the Katwa health zone, where her condition further deteriorated and she was admitted to the intensive care unit (ICU), where she eventually died on 4 February. The case was married to an EVD survivor, whose biological samples tested negative twice since 28 September 2020. A further three cases were reported, two of whom were reported to have had contact with the first reported case, with one of these two being a vaccinated healthcare worker who had treated the first case, and was reported to be themselves a case on 14 February in the Katwa health zone. Both cases who died were reportedly buried in the traditional way without safety precautions.

According to media sources, the so-called 'Ituri strain' has been identified in this outbreak. This strain was circulating in regions in North Kivu during the tenth EVD outbreak (2018-2020) in the DRC [7].

In recent years, the DRC has been affected by several EVD outbreaks. The eleventh outbreak of EVD in the DRC was declared on 1 June 2020 and took place on the western side of the country in the Equateur Province [8]. It culminated in 130 cases including 55 deaths and was declared over by the Minister of Health on 18 November 2020 [9].

North Kivu Provincial health authorities are currently leading the response and are supported by WHO and the DRC Ministry of Health. The cases are being investigated by WHO epidemiologists on-site, and so far more than 300 contacts have been identified [7]. A vaccination campaign was launched on 15 February 2021 in Butembo. Hospital staff of the Matanda Hospital, where the first detected case received treatment, were the first to receive the vaccine [10].

**Figure 1. Geographical distribution of confirmed and probable Ebola virus disease cases in DRC, 2021**

## Risk assessment questions

- What is the risk for EU/EEA citizens living in or travelling to affected areas in DRC to be affected by the current outbreak of EVD?
- What is the risk of the introduction and spread of the Ebola virus circulating in North Kivu, DRC within the EU/EEA?

## ECDC risk assessment

In this document, the risk was assessed following ECDC's rapid risk assessment methodology [11].

These EVD cases are the first ones of the disease reported in North Kivu, DRC since the tenth outbreak was declared over in June 2020 [12]. The source of infection of the first human case in this epidemic is currently unknown. The virus is known to persist in a very low percentage of survivors for more than two years, and transmission might have occurred through contact with a virus carrier survivor of the previous epidemic in North Kivu. However, a spill-over event from an animal reservoir cannot be totally excluded.

The ongoing outbreak may spread to other areas within DRC and/or in neighbouring countries, despite the health authorities in DRC having extensive experience in responding to EVD outbreaks. The ongoing COVID-19 pandemic and other ongoing outbreaks might challenge the response.

## Risk to EU/EEA citizens living in or travelling to affected areas in DRC

Considering the limited size of the outbreak and the absence of chains of transmission in densely populated areas, the current probability that EU/EEA citizens living in or travelling to EVD-affected areas of DRC will be exposed to the virus is very low, provided that they adhere to the recommended precautionary measures outlined in the first section of the 'Options for response' below. Transmission requires direct contact with blood, secretions, organs or other bodily fluids of dead or living infected persons or animals, all unlikely exposures for the general EU/EEA tourists or expatriates in DRC.

An increase in cases and, most importantly, the occurrence of chains of transmissions in populated areas and cities such as Goma, Butembo or Beni would increase the likelihood of exposure of EU/EEA citizens to Ebola virus.

Although the disease in unvaccinated people is severe and EU/EEA citizens are not commonly vaccinated against the disease, considering the very low likelihood of infection of EU/EEA citizens in DRC, the impact for EU/EEA citizens living and travelling in affected areas in DRC is considered low.

Overall, the current risk for EU/EEA citizens living or travelling to affected areas DRC is considered low.

Staff members of humanitarian, religious and other organisations, particularly healthcare workers in direct contact with patients and/or local communities in the affected areas, are more likely than general EU/EEA tourists or expatriates to be exposed to the virus. The likelihood of infection is currently low, provided that they adhere to the appropriate infection prevention and control measures [13]. EU/EEA citizens deployed to support the response to the outbreak are more likely than EU/EEA tourists or expatriates to be vaccinated against the disease, reducing its impact.

The overall risk for EU/EEA citizens deployed in response to the outbreak is considered low.

## Risk of introduction and spread within the EU/EEA

The most likely route by which the Ebola virus could be introduced to the EU/EEA is through infected people from affected areas travelling to the EU/EEA or the medical evacuation of cases to the EU/EEA. According to the International Air Travel Association, in 2019, there were about 87 000 travellers arriving from DRC to the EU/EEA [14]. Considering that the number of travellers has substantially decreased due to the COVID-19 pandemic and that travel restrictions are currently in place, the likelihood of introduction of the virus into the EU/EEA via an infectious traveller is very low.

The likelihood of secondary transmission of Ebola virus within the EU/EEA and the implementation of sustained chains of transmission within the EU/EEA is very low, as cases are likely to be promptly identified and isolated and follow-up control measures are likely to be implemented. During the large EVD outbreak in West Africa between 2013 and 2016, there was only one local transmission in the EU/EEA (in Spain) in a healthcare worker who had attended to an evacuated EVD patient [15,16].

Although the disease in unvaccinated people is severe and EU/EEA citizens are not commonly vaccinated against the disease, considering the very low likelihood of introduction and secondary transmission of the virus within the EU/EEA, the impact for the EU/EEA citizens living in the EU/EEA is considered very low.

Overall, the current risk for the citizens in the EU/EEA is considered very low.

## Options for response

### EU/EEA visitors and residents of affected areas

EU/EEA visitors and residents in affected areas in DRC should apply the following precautionary measures:

- avoid contact with symptomatic patients/their bodily fluids, bodies and/or bodily fluids from deceased patients;
- avoid the consumption of bush meat and contact with wild animals, both alive and dead;
- wash and peel fruit and vegetables before consumption;
- wash hands regularly using soap or antiseptics;
- ensure safe sexual practices.

### Vaccines in the EU/EEA

Significant developments for the prevention of EVD have been made, with two vaccines now licensed for use in several countries, including in the EU [17-20]. The first of these vaccines is the Ervebo vaccine, which is a recombinant rVSVΔG-ZEBOV-GP live vaccine manufactured by Merck [21]. It was prequalified by WHO on 12 November 2019, and therefore allows its procurement for at-risk countries [22]. The Democratic Republic of Congo has approved the vaccine [23].

The second of these vaccines is a two-component vaccine (Zabdeno/Mvabea) manufactured by Janssen [18,19].

More information about EVD vaccines is available on [ECDC's website](#).

## Treatments

Recent advances have also been made in the treatment of EVD.

Inmazeb is manufactured by Regeneron Pharmaceuticals, and is a mixture of three monoclonal antibodies (atoltivimab, maftivimab, and odesivimab-ebgn). The drug was approved for use in the US in October 2020 [24].

Ebanga (Ansuvimab-zykl) is manufactured by Ridgeback Biotherapeutics, and is a human monoclonal antibody (mAb114). The drug was approved for use in the US on December 2020 [25].

More information about EVD treatment is available on [ECDC's website](#).

## Screening of travellers

Screening of travellers returning from the DRC is not necessary at this stage.

## Options for information and communication

In order to minimise the time between onset of symptoms, isolation and diagnosis, people who return from DRC should be informed about:

- the possibility of exposure to Ebola virus after visiting affected areas;
- the clinical presentation of the disease and the need to seek immediate medical care if symptoms develop;
- the need to immediately disclose their travel history when seeking medical care and to do so before arriving at a healthcare facility;
- the need to indicate any possible contact with sick individuals or wild animals while in the affected country;
- the procedure for contacting local public health authorities if infection is suspected.

In addition, healthcare providers in the EU/EEA should be informed of and sensitised to:

- the possibility of EVD among travellers returning from affected areas;
- the clinical presentation of the disease and the need to enquire about travel history and contacts in people returning from EVD-affected countries;
- the availability of protocols for the ascertainment of possible cases and procedures for referral to healthcare facilities;
- the imperative need for strict implementation of barrier management, use of personal protective measures and equipment and disinfection procedures in accordance with specific guidelines and WHO infection control recommendations when providing care to EVD cases.

## Source and date of request

ECDC internal decision, 17 February 2021.

## Consulted experts

ECDC experts (in alphabetic order): Tamas Bakonyi, Olivier Briet, Carlos Carvalho, Céline Gossner, Joana Haussig, Emily Scott, Ariana Wijermans.

## Disclaimer

ECDC issues this risk assessment document based on an internal decision and in accordance with Article 10 of Decision No 1082/13/EC and Article 7(1) of Regulation (EC) No 851/2004 establishing a European centre for disease prevention and control (ECDC). In the framework of ECDC's mandate, the specific purpose of an ECDC risk assessment is to present different options on a certain matter. The responsibility on the choice of which option to pursue and which actions to take, including the adoption of mandatory rules or guidelines, lies exclusively with the EU/EEA Member States. In its activities, ECDC strives to ensure its independence, high scientific quality, transparency and efficiency.

This report was written with the coordination and assistance of an Internal Response Team at the European Centre for Disease Prevention and Control. All data published in this risk assessment are correct to the best of our knowledge at the time of publication. Maps and figures published do not represent a statement on the part of ECDC or its partners on the legal or border status of the countries and territories shown.

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