Position Statement

September 2025

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Ebola Virus

Background

Ebola viruses (EBOV) are members of a group (or genus) of viruses, four of which can cause Ebola disease (EBOD) in humans. The most well-known species is *Orthoebolavirus zairense* (EBOV; formerly Zaire ebolavirus), identified in 1976 in the Democratic Republic of the Congo (DRC). The associated illness caused by EBOV is referred to as Ebola virus disease (EVD).

EBOD is a serious acute illness. The average case fatality rate is approximately 50% but may vary from 25–90% depending on the level of available supportive care and the patient's immune response.

Epidemiology, pathogenesis, infection dynamics and clinical characteristics relevant to the safety of substances of human origin (SoHO)

EBOD is a zoonosis. Although not proven, fruit bats are thought to be the most likely natural Ebola virus hosts with non-human primates and other animals serving as intermediate hosts. The increase in the number of outbreaks of EBOD in the last 20 years is likely due to the closer proximity of human habitats to Ebola reservoirs as well as deforestation and climate change. The exact mechanism of *Orthoebolavirus* spillover from animals to humans has not been elucidated, but once this has occurred inter-human transmission is through direct (or indirect, e.g. soiled bedding) contact with the blood and body fluids of an infected individual.

The virus is geographically restricted to the endemic areas where its host species reside. Occasional cases have been reported outside Africa – these are usually healthcare/laboratory acquired or associated infections.

The Democratic Republic of the Congo (DRC) continues to be the most frequently affected country, having had six outbreaks declared between May 2020 and September 2025 alone. The North Kivu region of the DRC was the area afflicted with the largest ever DRC outbreak from 2018 to 2020. The West African EVD outbreak in 2013–2016 however, which centred on Sierra Leone, Guinea and Liberia, has been the largest outbreak to date, with 28,000 cases and 11,000 deaths. A Ugandan Sudan Virus Disease (SVD) outbreak caused by *Orthoebolavirus sudanense* (SUDV) in September 2022 (declared over by 13 January 2023) included 142 confirmed cases and 55 deaths (case fatality ratio 38.7%).

Although transfusion-transmission is theoretically possible, at this time there have been no reports of cases in affected countries. It is assumed an infected and infectious donor would be symptomatic and thus unlikely to donate, however, asymptomatic infections have been described. Depending on the assay used and the extent of exposure, EBOV IgG has been detected in 2.5%–45.9% of contacts in EVD seroprevalence studies.

Transmission is seen frequently within families, within hospitals, and during some mortuary rituals where contact among individuals becomes more likely. Exposure to infected patients and their body fluids puts healthcare workers at a high risk of infection unless appropriate procedures are followed. Data from trials on the use of antivirals (e.g. monoclonal antibody therapies) and vaccines for both pre- and post-exposure prophylaxis has led to recommendations for their use in outbreak settings.

Several cases of sexual transmission have been reported. Ebola virus nucleic acid can persist in semen after recovery from EVD and is an important mode of transmission in the convalescent period.

Risk mitigation

(as applicable, e.g. measures adopted by UK blood, haemopoietic stem cells and tissue establishments, if any; availability of efficacious preventative measures, prophylaxis or treatment)

Although countries with EBOD outbreaks are generally not major tourist destinations, travel to and within these countries does occur, and there may be some migration to the UK and other European countries. EBOD outbreaks, excepting any potential person-to-person transmission in a healthcare setting when an infected individual has been moved to a non-affected country for treatment, have been identified only in countries that are also malarious. Therefore, all individuals who have been in affected areas will be excluded from blood or tissue donation for at least four months after their return to the UK under current UK donor/donation malaria guidelines. Individuals who have ever been infected with Ebola virus are permanently excluded from donating, except for those who are donating immune (convalescent) plasma for therapeutic use in patients with EBOD.

A permanent deferral of blood donors who have ever been a sexual contact of an EBOD survivor is advised, because relapsed disease in the survivor creates a risk of onward transmission even after a significant interval of recovery. The evidence and literature available for review is supportive of common approach to Ebolavirus risk reduction measures across blood, tissue (excluding reproductive tissue) and haematopoietic stem cell donors. Therefore, potential blood, tissue (excluding reproductive tissue) and haematopoietic stem cell donors who are contacts of those who have been infected with Ebola should be excluded for six months from last contact.

Ebola serology could be used to identify risk (asymptomatic individuals who could present as donors and sexual contacts of asymptomatic individuals) but reliable CE-marked Ebola serology assays for blood donor screening are not available. Recent modelling data suggests a decline in antibody reactivity (even if there is periodic restimulation, as mentioned above) in the six months to two years post-recovery. In one study 3% (4/117) of previously affected individuals did not have detectable circulating Ebola virus specific antibodies. Due to the introduction of vaccines in high-risk populations, serological assays would need to distinguish vaccinated from naturally immune individuals and be able to detect all species. Therefore, serological testing of donors for Ebola virus specific antibodies is not employed as a blood/tissue safety measure at this time.

EBOD is mostly managed with good supportive care.

Most evidence on therapeutics and vaccination exists for EBOV.

WHO recommend EBOV-specific therapeutics for patients with confirmed EVD (2022), which include the monoclonal antibody agents mAb114 or REGN-EB3. Of note, they issued a conditional recommendation against treatment with remdesivir and ZMapp in these guidelines. A second two-dose vaccine (Zabdeno/Mvabea) is recommended for preventive vaccination in areas at lower risk for EVD (or areas neighbouring an outbreak).

Therapies and vaccines for other species of *Orthoebolavirus* are in phase 2 studies, including for SUDV.

Other relevant information

Convalescent (immune) plasma

As with many viral infections, those who recover from EBOD develop antibodies which then may confer a degree of protection against further exposure to the same Ebola virus species. One of the Ebola treatment approaches has been the infusion of plasma from recently infected and recovered individuals: convalescent or immune plasma. In theory, the antibodies present in the plasma would neutralise virus circulating in an infected individual, helping to reduce viral load and consequently reduce the load on the individual's immune system, with the overall aim of helping to ensure recovery.

Individuals who have recovered from EBOD may be eligible to donate convalescent (immune) plasma for use in the treatment of individuals with EBOD. Sensitive and specific IgG capture and competitive enzyme immunoassays have been used to identify potential high titre convalescent plasma donors 'in the field'.

Conclusion and recommendations

A review of current knowledge supports alignment of deferral criteria across blood, tissues and cells donors as regards to the deferral period following non-sexual contact with EBOVD. This is a period of >6 months from the last date of contact, return to UK from an endemic area, or completion of investigations.

Permanent deferral should continue to be applied to EBOVD survivors and their sexual contacts.

Countries affected by Ebola virus are shown in the Geographical Disease Risk Index (GDRI) and any associated Change Notifications.

Dr Ines Ushiro-Lumb
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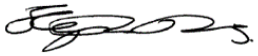

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