The current Ebola outbreak is the most widespread ever recorded. Since it began in Guinea in December 2013, it has spread to Liberia, Nigeria and Sierra Leone. As of 20 August 2014, there were 2,473 cases and 1,350 deaths.

The first reported outbreak of Ebola virus disease (EVD) occurred in 1976 in the Democratic Republic of the Congo (then Zaire). The 2014 outbreak is by far the biggest in terms of numbers of people affected and geographical spread. It is also the first time that a large urban area (Monrovia, the capital of Liberia) has been affected; previous outbreaks have tended to occur in relatively remote areas, making it easier to impose quarantine procedures. There are now fears that infected individuals could travel outside of Africa.

On 8 August 2014, the World Health Organization (WHO) declared the outbreak a Public Health Event of International Concern (PHEIC), meaning that it requires a co-ordinated international response. This has only happened twice before: for the swine flu pandemic in 2009 and the re-emergence of polio in 2014.

Pharmacists can make an important contribution in educating and reassuring the public about the risks of EVD, advising travellers planning on visiting an Ebola-endemic area and explaining what measures can be taken to minimise risk of infection.

What is Ebola?
EVD is a haemorrhagic disease. There are five known strains of Ebola virus; the current outbreak has been identified as Zaire ebolavirus. Ebola typically has a mortality rate of 50%–90%; the mortality rate of the current outbreak is 53% (ref. 1).

It is believed the virus resides in animal reservoirs. Outbreaks are thought to be caused by animal-to-human transmission after people consume or come into contact with species of animal harbouring the virus, including monkeys and bats.

The virus can be killed by a variety of disinfectants, including the hypochlorites used in household bleach and swimming pool chlorine. Disinfection of surfaces, therefore, is an important control measure. And as soap will kill the virus, hand washing with soap and water is another important measure.

There are no specific treatments for EVD, although an experimental monoclonal antibody preparation has been used.

Transmission and symptoms
The Ebola virus is transmitted by direct contact with the body fluids of an infected patient or contact with a corpse of a person who has succumbed to disease. Viral entry is usually via mucous membranes, cuts or abrasions, and the virus can be transmitted from the dried body fluids of an infected individual on an object (e.g. bedsheets). Ebola can be sexually transmitted.

There is no risk of transmission during the incubation period, which usually lasts between 4–16 days following infection, with a range of 4–21 days. There is no transmission by air droplets (i.e. sneezing or coughing) and only a low risk of transmission during the early stages of the disease.

In the prodromal phase, it may present with non-specific flu-like symptoms including:
- fever
- diarrhoea

Timeline of Ebola incidences
Reported Ebola cases and deaths in major outbreaks by year
Health England advises the risk to tourists trying to report outbreaks and public health authorities in affected countries. Nonetheless, airlines do have procedures if such a situation should arise, in which passengers at risk would be identified for monitoring after the flight for 21 days.

Travellers may be at increased risk of contracting EVD if they are admitted to a hospital where Ebola cases are being treated and quarantine arrangements are in place. For this reason, unnecessary travel to current hotspots such as Sierra Leone or Liberia should be avoided. Travellers visiting friends and relatives in affected areas are also at increased risk of EVD infection, as they may become involved in helping to care for victims.

### Ebola treatment in the UK

Ebola is treated in the UK at the Royal Free Hospital’s high level isolation unit. The unit restricts access to only a specialist medical team and uses controlled ventilation tents around patients’ beds to contain any infection.

The unit has a dedicated laboratory and patient entrance, and includes autoclaves for destruction of medical waste and air filtration systems for effective quarantine.

To minimise the risk of EVD infection when visiting an Ebola-endemic area, travellers should be advised to:

- Avoid contact with symptomatic patients and their body fluids, deceased patients and their body fluids and wild animals (alive and dead);
- Avoid bush meat in endemic areas (i.e., the meat of wild animals that could be a reservoir for the disease);
- Wash hands regularly using soap or an alcohol-based hand sanitiser;
- Consider avoiding unessential travel to affected countries;
- Identify appropriate in-country healthcare resources in advance of travelling;
- Check that medical insurance will cover repatriation in the event of infection.

### Infection risk

Family members or health workers caring for infected patients are at the greatest risk of infection. Those travelling to Ebola-endemic areas and not intending to have any contact with victims are at a very low risk. The WHO has not discouraged travellers from visiting countries reporting outbreaks and Public Health England advises the risk to tourists is low if precautions are followed.

Screening airline passengers at departure from affected areas or on arrival is not recommended, as measures such as thermal scanners are unlikely to identify cases. However, individual countries, such as Cameroon, have implemented such measures and imposed restrictions on entry.

There has never been a case of Ebola originating in or initially presenting in the UK. One Briton, who contracted EVD in Sierra Leone, was flown to the UK on 25 August 2014 to receive specialist care at the Royal Free Hospital’s high level isolation unit in London.

Air passengers may be concerned about travelling on a plane with passengers with EVD. However, the chances of contracting the disease, even when sitting next to a person with an active infection, are very low. Nonetheless, airlines do have procedures if such a situation should arise, in which passengers at risk would be identified for monitoring after the flight for 21 days.

Travellers may be at increased risk of contracting EVD if they are admitted to a hospital where Ebola cases are being treated and quarantine arrangements are in place. For this reason, unnecessary travel to current hotspots such as Sierra Leone or Liberia should be avoided. Travellers visiting friends and relatives in affected areas are also at increased risk of EVD infection, as they may become involved in helping to care for victims.

### Ebola prevention

A general risk assessment and risk management plan should be completed for anyone seeking travel health advice before entering an area where Ebola is endemic.

In particular, the risk assessment should consider the type of travel being undertaken (e.g., visiting friends and relatives, healthcare work), as well as the length of time being spent in the area.

The management plan should consist of steps to minimise the chance of contracting the disease, as well as addressing other risks and recommended travel advice, such as malaria chemoprophylaxis.

### References


### About the author

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