



Ebola Q&A for the public

October 2015

Questions about Ebola symptoms, treatment and contact tracing

What is Ebola?

Ebola virus disease (previously known as Ebola haemorrhagic fever) is a rare but severe disease that is caused by Ebola virus. It can result in uncontrolled bleeding, causing damage to the patient's vital organs. It was first recognised in 1976 and has caused sporadic outbreaks since in several African countries.

The virus is initially transmitted to people from wild animals and spreads in the human population through human-to-human transmission through contact with blood and body fluids.

What are the symptoms?

An infected person will typically develop a fever, headache, joint and muscle pain, sore throat, and intense muscle weakness. These symptoms start suddenly, between two and 21 days after becoming infected. Diarrhoea, vomiting, a rash, stomach pain and impaired kidney and liver function follow. The patient then bleeds internally and may also bleed from the ears, eyes, nose or mouth. Ebola virus disease is fatal in 50-90% of cases. The sooner people are given care, the better the chances that they will survive.

Who is at risk?

Anyone who cares for infected people or handles their blood or fluid samples is at risk of becoming infected. Hospital workers, laboratory workers and family members are at greatest risk. Strict infection control procedures and wearing protective clothing minimises this risk.

Can you catch Ebola by touching the skin of someone who was symptomatic?

Even with a symptomatic person, direct contact with blood or body fluids is the only way Ebola is transmitted. If the person has a fever but no other symptoms, then the level of virus is very low and unlikely to pose a risk of transmission. In later stages, all body fluids such as blood, urine, faeces, vomit, saliva and semen are infectious, with blood, faeces and vomit the most infectious. Ebola virus disease is **not** spread through ordinary social contact, such as shaking hands, travelling on public transport or sitting beside someone who is infected but who does not have any symptoms.

Can you catch Ebola from someone without symptoms?

No. People infected with Ebola can only spread the virus to other people once they have developed symptoms, such as a fever. Even if someone has symptoms, it's important to remember that the virus is only transmitted by direct contact with the blood or body fluids of an infected person.

Can people still carry the virus once they have recovered and are without symptoms?

We know that people who have had Ebola can suffer symptoms for many months after they have recovered from the disease. These can range from tiredness and headaches to joint pains and eye disturbances, and patients may need additional medical support.

The virus can sometimes still be found in fluids in parts of the body that are less easily reached by the immune system. This includes the cerebrospinal fluid (CSF, which bathes the brain), breast milk, semen and the fluid in the eye. However, the fact that these sites are difficult to reach also means that the risk of any onward transmission of disease is very small.

When infection has occurred following contact with a survivor this has been related to very intimate contact, either through sexual transmission or breast milk.

Why can people still carry the virus once they have recovered?

Some areas of the body are less easily reached by the antibodies and killer cells of the immune system that combat Ebola, therefore viruses can occasionally survive in certain compartments in the body for long periods. These "immune privileged" sites include the brain, the chambers of the eye and the cavities of joints, as well as those parts of specialised secretory organs involved in the production of semen and milk. As a result, it takes a lot longer to clear the infection from these areas. The levels in breast milk and semen are quite low, but can cause infection in susceptible individuals who have direct contact with them through ingestion or sexual intercourse. So mothers who are recent survivors are usually advised not to breastfeed, and male survivors should initially practise safe sex.

Is there a risk to the public and the survivors in West Africa?

The risk to the public is very low. Survivors of Ebola, even those with persistent virus, are not a risk to those around them as there is usually no route for the virus to reach and infect another person. Despite the large number of survivors who are living, eating, breathing and having sex across West Africa, very few secondary cases have occurred, and in virtually all a clear exposure route has subsequently been identified.

Is there a treatment for Ebola?

There is no specific vaccine or medicine that has yet been proven to be universally effective against Ebola. There is no cure for this disease and antibiotics are not effective. In some instances, clinicians treating individuals with Ebola may source and decide to use

experimental drugs, such as Zmapp. Severely ill patients require intensive supportive care, which may include rehydration with intravenous fluids.

If we had a case in the UK, how would PHE trace their contacts?

England has a world-class healthcare system, with robust infection-control systems and processes, and disease-control systems. These are all active permanently, always available, and regularly tested and proven to be effective. Contact tracing will be undertaken by public health services if a patient has a positive test result for Ebola infection. In England, this will be undertaken by PHE, which has a network of teams around the country staffed by specialists with expertise in a wide range of infectious diseases. There are similar services in Scotland, Wales and Northern Ireland.

Who would we contact trace? What's the definition of a close contact?

Public health specialists will carefully interview all individuals to find out what sort of contact they had with the person infected with Ebola. Those who had close, physical contact with the Ebola-infected person or their body fluids while that person was symptomatic will be monitored. This involves checking if they have any symptoms, including monitoring their temperature.

The exact range of people included, such as family members, will depend on what sort of contact they had with the person infected with Ebola. It is important to remember that people infected with Ebola can only spread the virus to other people once they have developed symptoms and Ebola is **not** spread through ordinary social contact, such as shaking hands or sitting next to somebody who is well.

If someone with confirmed Ebola is sitting close, or travelled on public transport, who is followed up?

Public health specialists will carefully investigate the patient to find out what sort of symptoms he or she had while travelling, to decide what tracing activities and infection control procedures are required. These may include special cleaning and disinfection measures.

It is important to note that the UK has robust systems in place already for infectious disease control, including those in airports and ports, and that the risk of Ebola in England remains very low.

Questions about risk to the UK

Are people in the UK at risk of Ebola?

The overall risk to the general UK population continues to be very low. The virus is only transmitted by direct contact with the blood or body fluids (such as blood, diarrhoea or vomit) of an infected person.

There is a higher risk for humanitarian healthcare workers directly exposed to patients with Ebola disease unless appropriate personal protection equipment (PPE) is used. Specific advice has been prepared by PHE for humanitarian and health care workers.

Are we going to see an outbreak of Ebola in the UK?

The risk Ebola poses to the UK public is very low and continues to decrease due to the considerable decline in the scale of the epidemic in West Africa. England has a world-class healthcare system with robust infection-control systems and processes, and disease-control systems that have a proven record of dealing with imported infectious diseases. Ebola causes most harm in countries with less developed healthcare facilities and public health capacity.

Questions about UK preparedness

Are we prepared for Ebola in England?

PHE is continuing to work with government and NHS colleagues to ensure the UK remains alert to, and prepared for, the risk of Ebola. The overall risk of Ebola to the UK remains very low.

Cases of and transmission of Ebola in all countries in West Africa are now very low. The UK contingency plans for Ebola are based on the assumption that there is a low, but nevertheless real, risk of importing a case of Ebola from West Africa when a significant outbreak is ongoing. However, it is important to remember that if a case is identified here, the UK has robust, well-developed and well-tested NHS systems for managing unusual infectious diseases.

Since the outbreak in West Africa, The Chief Medical Officer has advised all front line medical practitioners to be alert to Ebola in people returning from affected areas. Testing for the disease can be undertaken rapidly at PHE's Rare and Imported Diseases Laboratory in Porton to confirm/exclude the diagnosis.

How can you be sure that every region is ready for an Ebola case?

Locally, PHE is working with NHS England and local authority directors of public health through the local health resilience partnerships (LHRPs) to ensure that plans are as robust

as possible. PHE has existing strong partnership arrangements with the NHS, local authorities and ports covering all aspects of public health and infection control. Additional arrangements have been set up alongside these to ensure all information and guidance relating to Ebola is shared widely among partners, including setting up workshops and planning exercises.

In October, PHE, the Department of Health and NHS England engaged in a national exercise to test our preparedness to Ebola in England. This demonstrated to us that we have a robust, well-developed and well-tested system for managing this disease. Local resilience forums across England are holding their own exercises, and we expect all local areas to be taking appropriate steps in light of the lessons learned. We are talking to Scotland, Wales and Northern Ireland about the lessons learnt.

What is the test for Ebola? How and where is it carried out? How long does it take?

PHE's Microbiology Services has provided a document as guidance on the appropriate pathway for testing for viral haemorrhagic fevers (VHF, such as Ebola), including samples to be taken, results turnaround time and other tests that may be conducted to look for alternative causes of illness. See: www.gov.uk/government/publications/viral-haemorrhagic-fever-sample-testing-advice

What is the process a patient will go through from being a possible to a confirmed case?

There are many diseases that have similar symptoms in the early stages so specialist infection clinicians will make expert judgements on what the most likely diagnosis is, based on the patient's history.

If Ebola is considered a possibility on this basis, then a person would be tested for the disease. A suspect case would be isolated in a side room to minimise contact with other people while they are being tested, and healthcare staff treating the patient will wear PPE, such as facemasks, goggles, gowns and gloves. It is only if this test is positive that the case is considered to be 'confirmed'.

If the test is positive then they will be transferred to a hospital-based high-level isolation unit at the Royal Free Hospital in London.

What if someone thinks they might have Ebola?

Unless you've come into contact with the blood or bodily fluid of an infected person (for example, by providing healthcare for a person with Ebola or handling the dead body of someone who died from Ebola), there is little chance of being infected.

The advice is that if people are worried about symptoms (such as fever, chills, muscle aches, headache, nausea, vomiting, diarrhoea, sore throat or rash) within 21 days of coming back from Guinea, Liberia or Sierra Leone, they should stay at home and immediately telephone 111 or 999 and explain they have recently visited West Africa.

If necessary, they would be taken by ambulance to hospital where they would be isolated and seen by healthcare staff wearing PPE. If required, blood samples would be taken for testing. If confirmed, the patient would be safely transferred to the Royal Free.

It's important to remember there are other illnesses that are much more common than Ebola (such as flu, typhoid fever and malaria) and have similar symptoms in the early stages, so proper medical assessment is really important to ensure each patient gets the right diagnosis and treatment. It is also really important that medical services are expecting a patient's arrival and calling 111 or 999 will ensure this happens.

What happens if someone who thinks they may have Ebola sees their GP or turns up at A&E without calling 111 or 999 first?

Specific advice on the management of such patients has been provided to GPs and Acute Trusts, and to the College of Emergency Medicine. It is available here:

www.gov.uk/government/collections/ebola-virus-disease-clinical-management-and-guidance#clinical-management

If we have an imported case or cases in the UK, will this swamp the NHS?

No. The UK has two specialist high-level isolation unit beds available at the Royal Free Hospital. There is further capacity available at the Royal Free and surge capacity at a number of other units across the country.