



Environmental Cleaning and Decontamination of an Aircraft Following a Suspect Case of Ebola

Scope

This document outlines the background, risks and guidelines for the environmental cleaning of aircraft for operators concerned with the risk of Ebola contamination from someone who may have travelled from one of the Ebola-affected countries in West Africa.

General principles:

- there is little or no risk of infection from a travelling passenger who has visited Ebola-affected countries in West Africa and who does not have any symptoms
- there is no need to change any existing cleaning and decontamination protocols for routine use. In particular, there is no need to use agents such as hypochlorite that are unsuitable for use in aircraft, even if they are recommended for other settings
- the Ebola virus is spread between people through direct physical contact with infected body fluids. People infected with Ebola can only spread the virus to other people once they have developed symptoms, such as a temperature $\geq 37.5^{\circ}\text{C}$, body aches, severe headaches, vomiting, diarrhoea, or unexplained bleeding
- if there is spillage of body fluids from a person who is suspected to have Ebola and is categorised as **high possibility** (see definition below), isolate the contaminated area and await results of testing. If a diagnosis of Ebola is confirmed, guidance for cleaning and decontamination will be provided from the PHE National Incident Co-ordination Centre (NICC).

Introduction

Since March 2014 there has been a large outbreak of Ebola virus in West Africa, with widespread and intense transmission in Guinea, Liberia and Sierra Leone. This is the largest ever known outbreak of this disease prompting the World Health Organization (WHO) to declare a Public Health Emergency of International Concern in August 2014¹. Sporadic cases have also occurred in Mali, Nigeria, Senegal, Spain, the UK and the US.

There remains an expectation that a handful of further cases may occur in the UK in the coming months. Thus, although the risk of imported cases remains low, it is possible that further persons infected in Guinea, Liberia, or Sierra Leone could arrive in the UK while incubating the disease (the incubation period is 2-21 days) and develop symptoms after their return.

Ebola transmission

Ebola virus is transmitted among humans through close and direct physical contact with infected body fluids. This means that the body fluids from an infected person (alive or dead) have touched someone's eyes, nose or mouth, or an open cut, wound or abrasion.

Unlike infections like flu or measles, which can be spread by virus particles that remain in the air after an infected person coughs or sneezes, Ebola is not spread through the airborne route.

People infected with Ebola can only spread the virus to other people once they have developed symptoms.

In the early phase when a person just has a fever, although virus is present in the blood, the level of virus in body fluids such as saliva is very low and unlikely to pose a transmission risk. In the later phase, once uncontrolled vomiting and diarrhoea are present, all body fluids (such as blood, faeces, vomit, urine and saliva) should be considered infectious, with blood, faeces and vomit being the most infectious.

Ebola virus is not spread through routine, social contact (such as shaking hands) with asymptomatic individuals.

Procedure

It will not be known immediately whether a passenger with fever or other symptoms on board an aircraft is infected with Ebola virus; there might be a suspicion of Ebola infection, but until a laboratory test confirms the presence/absence of the virus they can be treated as a suspected case of communicable disease on board as per IATA guidelines². Aircrew should follow standard procedures to notify a case of suspected communicable disease in accordance with CAP 789 Requirements and Guidance Material for Operators, Chapter 12, paragraph 30 'Guidelines for the Notification of Suspected Communicable Disease':

<http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3978>

Information to be reported includes:

- name and date of birth of the sick person
- the country or countries the sick person has visited
- symptoms they are experiencing

The destination air traffic service should inform port/public health authorities either directly or via the airport operations control centre, in accordance with CAP 493 Manual of Air Traffic Services Part 1, Section 5, Chapter 1 'Aircraft Emergencies', paragraph 1.84:

<http://www.caa.co.uk/docs/33/CAP%20493%20MATS%20edition%205.pdf>

Initial risk assessment will be carried out by the port health officer who, if necessary, will then contact the port medical officer, usually the local PHE health protection team (HPT) consultant in communicable disease control (CCDC). Port/public health authorities may request further information on the suspected case via the airline operations centre, handling agent, destination airport or ground-to-air medical advisory service. They will recommend any immediate measures to be taken, and alert the PHE NICC to co-ordinate and support the required public health response to the incident.

If the suspect case has been identified before landing, there is no requirement for the aircraft to be parked at a remote location and it should usually be directed to the previously allocated stand.

Passengers on a flight where there is a suspected Ebola case should be disembarked as normal. Aircraft and airport operators should co-operate with the public health authority in the collection or provision of contact details for passengers, crew and cleaning staff if required.

In light of the Ebola outbreak, the International Air Transport Association (IATA) has updated its guidance for cleaning crews of aircraft³. However, in most cases no special precautions will be necessary once the suspect case has been evacuated via ambulance and the passengers disembarked. Where the risk has been identified as being a '**low possibility of Ebola**', as per Advisory Committee on Dangerous Pathogens (ACDP) guidance:

<https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients> then the aircraft can be cleaned in accordance with normal procedures and returned to service.

However, if the public health risk assessment has concluded that the suspect case should be categorised as '**high possibility of Ebola**', as per **ACDP guidance**: any areas of the aircraft where there has been a body fluid spill should be isolated and the aircraft should be 'quarantined', either on the stand or after being moved to a reserved area, while waiting for the results of diagnostic test. These results should be available within 24 hours.

Where a **low possibility of Ebola** suspect case has been identified any body fluids present should be initially treated with a body fluid spill kit approved for use in aircraft. While wearing appropriate personal protective equipment (PPE), absorbent granules can be added to the fluid spill, which can then be removed and placed in the clinical waste bag supplied within the spill kit.

When this has been completed the cleaning staff can use a standard disinfectant wipe to clean the area and then existing cleaning protocols can be followed.

If the diagnosis of Ebola is confirmed **in a high possibility** suspect case, cleaning and decontamination advice should be sought from the PHE NICC. It is important that staff tasked with cleaning the aircraft, where a confirmed individual with Ebola virus has been present, do so using an approved system of working agreed with PHE and the aircraft operator⁴.

References

¹ WHO Statement on the 1st meeting of the IHR Emergency Committee on the 2014 Ebola outbreak in West Africa. Available at: <http://www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/>. Accessed 7 January 2015.

² IATA Suspected communicable disease: Guidelines for Cabin Crew. Available at: <http://www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cabin-crew-2011.pdf> Accessed 7 January 2015.

³ IATA Suspected communicable disease: Guidelines for Cleaning Crew. Available at: <http://www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cleaning-crew.pdf> Accessed 7 January 2015.

⁴ PHE Environmental cleaning and clinical waste disposal guidance for potential Ebola contamination in non-healthcare settings. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/390401/Environmental_cleaning_guidance_for_potential_Ebola_contamination__2_.pdf Accessed 7 January 2015.

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