

The College of Emergency Medicine

Best Practice Guideline

EBOLA

Guidance for

Emergency

Departments



Public Health
England

Updated
December 2014

The College of Emergency Medicine, in collaboration with Public Health England, has prepared this brief guidance to assist all staff working in Emergency Departments in the UK and Ireland.

The guidance collates current national and international advice, but it is not comprehensive in scope. Rather it is intended to provide a useful overview and practical support to the specific issues of dealing with potential Ebola cases in an Emergency Department (ED). This guidance will be updated periodically.

Introduction

The Ebola virus is contagious and has a high mortality. Although the probability of any department or clinician encountering a case is currently very low, there can be no cause for complacency and sensible, pragmatic planning must underpin the response of every hospital.

In particular, it should be noted that a patient with the Ebola infection may arrive in an overcrowded ED with hundreds of patients, relatives and staff in a closely confined area; immediate assessment may not occur but exposure to others within the ED will occur. The impact of this on staff, other patients, relatives and the wider community needs to be recognised and planned for.

As with many infectious diseases, ED staff are at special risk of being infected by a patient. Special measures, which may at times be disproportionate, should be considered. Different processes will be required to manage ED flows after the first positive case within a community.

Hospitals must be prepared

The following checklist, produced by the Centres for Disease Control and Prevention (CDC), is a simple process to ascertain whether key actions have been taken:

<http://www.cdc.gov/vhf/ebola/pdf/hospital-checklist-ebola-preparedness.pdf>

The possibility of Ebola must be excluded in all patients attending the ED at their point of first contact, which may be someone in a pre-hospital service (Primary Care, 111 or ambulance service) streaming role, triage or reception (depending on local service configurations). Staff at this initial contact must adopt a 'talk but don't touch' approach. Effective communication from outside agencies must be in place, with clear instruction given relating to the route of entry to secondary care (which may not be via the ED).

Staff should be aware that details of the specialist guidance on the management (including infection control) of patients with viral haemorrhagic fever including Ebola has been produced by the Advisory Committee on Dangerous Pathogens (ACDP). The guidance and algorithm for the management of a suspected patient are available at:

<https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients>

As part of the preparation, Emergency Departments should have available nine packs of appropriate PPE made up, in sizes appropriate to the profile of staff working in the department, outside the designated room. Also emergency departments should ensure there is adequate stock of appropriate PPE available in the department to allow for a

patient to be managed for 12 hours. Basic pre-prepared treatment packs should also be available.

Cases of Ebola Infection presenting in the Emergency Department

Potential cases of Ebola could either arrive by ambulance or turn up at an ED seeking treatment.

1 Patients arriving by ambulance

The hospital should receive a pre-alert from the ambulance crew regarding the possibility of the patient having Ebola infection. If this risk is raised during the emergency call, a specialist ambulance crew will be deployed.

On receipt of the call, ED staff:

1. Identify a side room where the patient can be safely assessed
2. Access appropriate Personal Protective Equipment (PPE) and this should be worn by staff meeting the ambulance and transferring the patient

2 Patients turning up in the ED

Rapid identification and isolation of Ebola cases are essential to minimize transmission

“Talk but don’t touch”

The **initial screening questions** should establish:

1. Has the individual travelled from one of the affected areas**, or cared for an individual with Ebola within the last 21 days?

AND

2. Has the individual a fever ($\geq 37.5^{\circ}\text{C}$) or history of fever in past 24 hours?

** Currently Guinea, Liberia and Sierra Leone are countries with intense transmission, but staff should have up to date information on affected areas. This is available from: <https://www.gov.uk/government/publications/ebola-virus-disease-epidemiological-update>

If YES:

The patients should be isolated in a single room with handwashing facilities and a telephone, and if possible a private bathroom (otherwise a dedicated commode). There should also be an adjacent contained space in which appropriate infection control can be carried out. The separate, contained space is to be used for removal of PPE and waste disposal with clear segregation of clean and dirty

A clinician trained in the use of and wearing of appropriate PPE as advised by ACDP should take full history including recent travel/exposure.

The recommended PPE includes:

- double gloves with extra-long cuffs

- fluid repellent single use coveralls consistent with the current ACDP guidance
- ankle-length endoscopy apron
- surgical cap
- full face shield (visor)
- close fitting fluid repellent mask
- wellingtons

Staff should go into the room in pairs and a third member of staff in the relevant PPE should be outside the room to assist as necessary. A fourth member of staff should act as a safety officer and should monitor time in PPE and the activity of the staff

Correct training in putting on and removal of PPE is critical for emergency department staff who will have patient contact.

For more information on infection prevention and control for emergency departments PHE have issued this document: <https://www.gov.uk/government/publications/ebola-infection-prevention-and-control-for-emergency-departments>

In the event of a failure of this process, such that the patient has been waiting in a public area, the following steps should be taken:

1. Patient moved to cubicle as above as soon as risk identified
2. Cordon off the affected area until the patient has been assessed
3. Leave the area unused until the patient has been assessed
4. If the patient is considered high risk for Ebola:
 - Inform hospital lead for infection control and follow their guidance
 - Inform the local PHE Health Protection team
 - Properly trained and equipped staff to decontaminate the area, according to ACDP guidance¹
 - Document names of all patients/staff that might have come into physical contact with the patient or body fluids

¹https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354640/VHF_guidance_document_updated_links.pdf

Subsequent Action if Ebola is suspected:

- Discuss with an Infection Consultant (infectious diseases/ microbiology /virology) regarding risk assessment for Ebola, and they will discuss testing and further management with the Imported Fever Service(IFS) as necessary.
- Inform infection control services, while maintaining a response proportionate to the assessed risk.
- Relevant diagnostic tests should not be delayed while awaiting the results of Ebola tests (e.g. malaria test, FBC, U&Es, LFTs, clotting screen, CRP, glucose and blood cultures).
- If an Ebola test is advised by the IFS, the patient should be kept in isolation and the local Health Protection team should be informed.

The following algorithm (ACDP) published by Department of Health (England) should guide the decision making:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354641/VHF_algorithm_10_09_2014.pdf

Facts about Ebola that underpin appropriate Infection Control strategy

1. Ebola is not a robust virus and is readily inactivated e.g. by alcohol or soap and water.
2. It is transmitted via contact with body fluids. No evidence of airborne (aerosol-mediated) transmission.
3. Patients are not infectious until they are symptomatic.
4. Patients become more infectious as their disease progresses. The risk of transmission through casual contact with a mildly ill patient is low. However, high concentrations of the virus may occur in diarrhoeal stool and vomitus and the clinical environment can become very highly contaminated.

SO:

- Person-to-person transmission can be prevented by:
 - Avoiding sharps injuries;
 - Avoiding body fluid splashes/droplets
 - Avoiding touching mucosae with contaminated hands.
- Wearing PPE to cover the eyes, nose and mouth will protect against splashes, droplets and hand contamination only for as long as that PPE is being worn
- There is significant danger of contamination during the removal of PPE unless it is managed in a systematic manner using both a buddy and a safety officer to prevent inadvertent contamination of eyes, mouth and hands
- To avoid hands being (re)contaminated after removal of PPE, the doffing procedure, the waste disposal processes and environmental decontamination procedures must all be meticulous; PPE is only a part of Ebola IPC

Most patients returning from the affected areas of West Africa will not have Ebola but may have other viral, bacterial or parasitic infections. Of greatest concern is the possibility of falciparum malaria or severe bacterial sepsis. Where this is regarded as probable, empirical therapy with anti-malarials and /or broad spectrum antibiotics should be commenced as soon as blood samples for parasitology and microbiology have been taken (with proper precautions). It is likely the advice from your Infection Consultant will include a rapid malarial test, but the Imported Fever Service will advise on the management and investigation of the patient.

Preparation for the possibility of a Suspected Ebola case in the ED

It is essential that the Medical Director, Director of Nursing and Infectious diseases/microbiology consultants of each and every acute hospital understand the need for:

1. A locally configured plan, including consideration for use of interpreters, signage, action cards, transfer and analysis of pathology specimens, disposal of contaminated disposables and bodily fluid, transfer to next stage of care and decontamination of rooms and equipment (e.g. trolleys).
2. An education programme for staff.
3. Regular drills for:
 - Reception of patients at risk
 - Donning and safely removing PPE
 - Initial assessment of at risk patients
 - Disposal of body fluids
 - Transfer of patients
 - Recovery after failure in step of the process.
4. A properly equipped area within/ adjacent to the ED that is both accessible 24/7 and easily quarantined.
5. 24/7 telephone access for EM staff to appropriate expertise to both advise and attend the ED to assist in patient investigation and treatment.

Flow Chart for Managing Suspected Ebola Cases in EDs

- Individuals who present with a fever [$\geq 37.5^{\circ}\text{C}$], or history of fever in the previous 24 hours,
AND
 - who have visited an affected area within the past 21 days (currently Guinea, Sierra Leone and Liberia)
OR who have cared for or come into contact with body fluids or clinical specimens from a live or dead individual with known or strongly suspected to have Ebola virus disease
- SHOULD BE SUSPECTED OF EBOLA INFECTION**



- Individuals should be **isolated in a side room straightaway** with toilet or commode
- They should **NOT** sit in the general waiting room



- A **full history** should be taken by a clinician trained in the use and wearing of appropriate **PPE** (see guidance).
- The history includes: travel history, return date to the UK, presenting symptoms. any contact with persons known/suspected to have Ebola infection and high risk activities (e.g. participating in funerals for Ebola cases)



If Ebola virus disease is suspected, then the case should be **discussed with an infection specialist** at your local trust (i.e. a consultant in microbiology, virology or an infectious diseases physician)* who may seek advice from the National Imported Fever Service.

Relevant diagnostic tests should not be delayed while awaiting the results of Ebola tests (e.g. malaria test, FBC, U&Es, LFTs, clotting screen, CRP, glucose and blood cultures).

*Further guidance is available at

<https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients>

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