

Surgical Protocol for Possible or Confirmed Ebola Cases

Ebola is an infectious disease caused by a filovirus (*Ebola virus*), whose normal host species is unknown. Infection can be potentially fatal and operating room personnel (nurses, surgeons, technicians, and anesthesia staff) all need to be aware of patients with possible or confirmed Ebola infection.

Elective surgical procedures should **not** be performed in cases of suspected or confirmed Ebola. In cases where an emergency operation must be performed this protocol should be implemented to minimize risk to hospital personnel. The choice of operative approach (open or MIS) should take into consideration minimizing potential hazards to all members of the OR team.

Although protocols for Personal Protective Equipment (PPE) are in place to protect health care workers, there is no guideline for operating room personnel and surgical providers who might need to perform an operation on a patient with confirmed or suspected Ebola infection, therefore we have adapted relevant Centers for Disease Control Recommendations and apply them specifically to the OR environment.

Protocol

1. Patient Transport and Transfer to OR

All healthcare providers should wear the following PPE to transport and transfer a patient to the OR with confirmed or suspected Ebola infection.

- Gloves
- Level 3 *Association for the Advancement of Medical Instrumentation* (AAMI) fluid resistant gown
- eye protection (goggles or face shield)
- Facemask

2. Surgical Checklist

Suspected or confirmed Ebola status should be discussed in the pre and post operative briefing as an integral part of the Safe Surgery Checklist so all personnel are aware of potential risks of exposure.

3. OR Staff Personal Protection Equipment

Due to the significant risk of exposure to blood or bodily fluids all OR room personnel should wear:

Personal Protective Gear

- AAMI Level 4* Impervious Surgical Gowns
- Leg coverings that have full plastic film coating over the fabric not just over the foot area.
- Full face shield
- Mask
- Double gloves
- Surgical hood

4. Surgical Drapes

AAMI Level 4* drapes should be used.

*Level 4 AAMI rated gowns, drapes, and protective apparel demonstrate the ability to resist liquid and viral penetration in a laboratory test, ASTM F1671 (Standard test method for resistance of materials used in protective clothing to penetration by blood-borne pathogens using Phi-X174 bacteriophage penetration as a test system).

5. Instrumentation and Sharps

- Keep sharps to a minimum
- Use instruments, rather than fingers, to grasp needles, retract tissue, and

load/unload needles and scalpels

- Give a verbal announcement when passing sharps
- Avoid hand-to-hand passage of sharp instruments by using a basin or neutral zone that has been agreed upon at the case start
- Use alternative cutting methods such as blunt electrocautery
- Substitute endoscopic surgery for open surgery when possible
- Use round-tipped scalpel blades instead of pointed sharp-tipped blades
- Use electrocautery preferentially to scalpel for incisions
- No needles or sharps on the Mayo stand
- No recapping of needles
- Use blunt tip suture needles when possible
- Continue “sharps safety” techniques during OR table clean up post procedure

6. OR Staff Exposure (adapted from CDC guidelines)

Persons with percutaneous or mucocutaneous exposures to blood, body fluids, secretions, or excretions from a patient with suspected or confirmed Ebola should:

- Stop working and immediately wash the affected skin surfaces with soap and water.
- Mucous membranes (e.g., conjunctiva) should be irrigated with copious amounts of water or eyewash solution
- Immediately contact Infectious Disease consultant in your hospital for post exposure evaluation.

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Updates will be made if and when new data are available.

References

<http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf>

<http://www.cdc.gov/sharpssafety/resources.html>

<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>