



KENYATTA NATIONAL HOSPITAL

SOP/KNH/IPC-EBOLA/011

VERSION: 00

DEPARTMENT: INFECTION PREVENTION & CONTROL

CLEANING AND DISINFECTING VEHICLES



1. Scope

This procedure describes the process of disinfecting vehicles after contamination with the Ebola virus. This may be as a result of transport of suspected, probable or confirmed Ebola cases, waste, bodies or samples.

2. Purpose

To ensure the process of disinfecting and cleaning vehicles is appropriately performed thereby ensuring safety of the health care worker, patient, community and the environment by reducing the risk of infecting non-infected individuals.

3. Terms & Definitions

Personal protective equipment (PPE) – specialized clothing or equipment worn by an individual for protection against infectious material.

4. Responsibilities

- 4.1 The Deputy Director Clinical Services has the overall responsibility for ensuring that the requirements for disinfecting and cleaning vehicles are available to ensure appropriate execution of the process.
- 4.2. The Infection Prevention Co-ordinator has the responsibility of identification, development, supervision of implementation, review and maintenance of these standard operating procedures.
- 4.3 The driver has the responsibility of parking and removing the vehicle from the designated disinfection area.
- 4.4 The cleaner has the responsibility of disinfecting the vehicle and maintaining up to date records.

5. Method

Requirements:

- Full PPE
- Bucket with shortened mop
- Damp rag
- Bucket with 0.05% chlorine solution
- Bucket with 0.5% chlorine solution
- Bucket with detergent and water
- Clean water

- 5.1 The vehicle is parked in the designated disinfection area by the driver. This is an area with an overhead covering, and good drainage system that drains into the septic tank of the Ebola Isolation Unit. This will allow waste water to be treated before discharge into the main sewer system.
- 5.2 Put on full protective personal equipment (PPE) (Refer to SOP on wearing and removing PPE SOP/KNH/IPC-EBOLA/01). NB: Industrial gloves can be used as the second pair of gloves instead of medical latex gloves.
- 5.3 Assemble all cleaning items.



- 5.4 All items that are removable reusable material should be removed and disinfected as per SOP for cleaning reusable materials SOP/KNH/IPC-EBOLA/09.
- 5.5 Rinse the interior of the vehicle with 0.5% chlorine bleach solution. You can use a mop with a shortened handle to assist in cleaning.
- 5.6 Prepare a soapy solution (clean water and detergent). Rinse the interior of the vehicle. You can use a mop with a shortened handle to assist in cleaning.
- 5.7 After this is complete rinse the interior of the vehicle again with 0.5% chlorine bleach solution. You can use a mop with a shortened handle to assist in cleaning. Let it soak for 30 minutes.
- 5.8 Rinse well with clean water and let the vehicle air dry. Be sure to rinse well because the chlorine solution is corrosive to the vehicle.
- 5.9 After completion of cleaning, clean all cleaning supplies with 0.5% chlorine solution. Soak the mop in 0.05% chlorine solution for 30 minutes (preferably overnight). Remove and rinse with clean water. After decontamination the cleaning items should be thoroughly rinsed with water (to remove irritating hypochlorite residues and salt deposits) before reuse.
- 5.10 Remove PPE (Refer to SOP on wearing and removing PPE: SOP/KNH/IPC-EBOLA/01).
- 5.11 Document the day and time the vehicle was disinfected and by whom after removing PPE.
- 5.10 Once the vehicle is dry, allow the driver to remove the vehicle from the designated disinfection area.

5.11 Precautions

- 5.11.1 Do not brush the car or sweep with a broom.
- 5.11.2 Surfaces should not be cleaned with dry rags, to avoid contaminating the air and other surfaces with air-borne particles.
- 5.11.3 Do not spray, it is potentially dangerous and has no proven scientific basis.
- 5.11.4 As a precaution wear full PPE before handling cleaning supplies that have been previously used.
- 5.11.5 Chlorine solutions should be prepared daily.

6. References

- 6.1 Ebola & Marburg Outbreak Control Guidance Manual Version 2.0 Peter Thomson MSF 2007
- 6.2 Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola August 2014 World Health Organisation
- 6.3 Infection control for viral haemorrhagic fevers in the African health care setting – World Health Organisation, US Department of Health and Human services

7. Appendix

- 7.1 How to make chlorine solution



7.1 How to make chlorine solutions

7.1.1 Example I - Using Liquid Bleach

Chlorine in liquid bleach comes in different concentrations. Any concentration can be used to make a dilute chlorine solution by applying the following formula:

$$\left(\frac{\% \text{ chlorine in liquid bleach}}{\% \text{ chlorine desired}} \right) - 1 = \text{Total parts of water for each part bleach}$$

Example: To make a 0.5% chlorine solution from 3.5% bleach:

$$\left(\frac{3.5\%}{0.5\%} \right) - 1 = 7 - 1 = 6 \text{ parts water for each part bleach}$$

Therefore, you must add 1 part 3.5% bleach to 6 parts water to make a 0.5% chlorine solution. "Parts" can be used for any unit of measure (e.g. ounce, litre or gallon) or any container used for measuring, such as a pitcher.

7.1.2 Example II - Using Bleach Powder

If using bleach powder, calculate the amount of bleach to be mixed with each litre of water by using the following formula:

$$\left(\frac{\% \text{ chlorine desired}}{\% \text{ chlorine in bleach powder}} \right) \times 1\,000 = \text{Grams of bleach powder for each litre of water}$$

Example: To make a 0.5% chlorine solution from calcium hypochlorite (bleach) powder containing 35% active chlorine:

$$\left(\frac{0.5\%}{35\%} \right) \times 1\,000 = 0.0143 \times 1\,000 = 14.3$$

Therefore, you must dissolve 14.3 grams of calcium hypochlorite (bleach) powder in each litre of water used to make a 0.5% chlorine solution.

When bleach powder is used; the resulting chlorine solution is likely to be cloudy (milky).