

## **Appendix 13: Recommendations for decontamination of domestic premises of a probable or confirmed Ebola Virus Disease (EVD) case**

For detailed guidance on environmental cleaning for EVD, refer to the *Infection prevention and control principles and recommendations for Ebola Virus Disease* document (33).

### **Principles**

When planning for environmental cleaning in a non-hospital setting, it is important to consider whether the case was symptomatic, and whether the symptoms were "wet", with copious vomiting, diarrhoea and other fluids, or "dry" with onset of fever, muscle pain, headache and sore throat:

- there is negligible risk that household items used by a patient who is not producing secretions would contain Ebola virus, and these items should be cleaned and reused in the normal way unless there is reason to discard them
- whilst awaiting laboratory test results for a case in the "wet" phase, it may be possible to isolate any potentially contaminated items, such as by closing off a room

The length of time the Ebola virus remains viable in the environment is unknown, however documented evidence shows a viability period of six days (7, 45, 46). To minimise risk to decontamination staff, decontamination should be delayed until six days after the case has been removed from the premises, where possible. This could involve shutting off a room or area of the house. The presence of other material e.g. faeces (which may provide protection for the virus), temperature, relative humidity and ultraviolet (UV) light can affect whether Ebolaviruses remain viable in the environment; however, they are readily inactivated by low-level disinfectants.

### **Cleaning requirements for low risk/ "dry" case**

Ensure appropriate Personal Protective Equipment (PPE) is worn, comprising a long sleeved shirt, gloves, mask and goggles or face shield. Areas where hand contact is most likely to have occurred (toilets, hand basins, taps, door knobs, bins, and bench tops) should be wiped down with a weak sodium hypochlorite solution. Used cleaning materials should be bagged and disposed of into the general waste.

### **Cleaning for a higher risk/ "wet" case**

#### ***Training and PPE requirements for staff***

Staff or persons undertaking decontamination must have an understanding of the nature of the Ebola virus and its modes of transmission and must follow appropriate infection control procedures including:

- Hand hygiene
- Cover all skin using an appropriate combination of PPE including, but not limited to:
  - gloves
  - a fluid resistant long-sleeved gown or fluid resistant overalls
  - eye protection (e.g. goggles)
  - P2/N95 respirator
  - face shield, leg and shoe coverings

## ***Planning the cleaning***

Conduct an initial inspection of premises to determine:

- access for unloading / loading of equipment and vehicles to limit the risk of contamination spread
- the nature and extent of any contamination and the necessary techniques and resources to address the nature and extent of contamination
- particular consideration of the need for and method of removing and disposing of any large items such as mattresses
- locations identified for the storing of waste receptacles and furniture or other items, preparing and disposing of cleaning solutions, transfer of materials to prevent (re)contamination, clean sites for the donning and doffing of PPE etc.

## ***Cleaning procedure***

### **Surfaces**

Areas where hand contact is most likely to have occurred (door knobs, taps, bench tops) should be decontaminated as a priority in a two stage process – first with a neutral detergent and then with a strong sodium hypochlorite solution.<sup>3</sup> Other surfaces without visible contamination should be wiped down with a weak sodium hypochlorite solution.<sup>3</sup> Where there is gross contamination of a surface such as by blood, faeces, vomit or other bodily fluids, disinfect any visible surface contamination by covering with absorbent material (e.g. paper towels), then strong hypochlorite solution on to saturate the area, and allow solution to soak into spills for at least 30 minutes before cleaning.

### **Decontamination of linen, clothing, bedding and soft furnishings**

- Grossly contaminated materials such as bed linen or clothing should be bagged, or otherwise contained, on site, and transported/disposed of as infectious waste<sup>4</sup>
- Bed linen, clothing and other materials that are not grossly contaminated should be laundered in the normal way
- Soft furnishings that are not grossly contaminated may be steam cleaned as a precaution

### **Safety precautions and disposal of cleaning equipment**

- The generation of contaminated aerosols or splashes (e.g. through pressure sprays) or dusts (e.g. dry sweeping) should be avoided. Areas where disinfectants are being used should be well ventilated
- Use of chemicals (including recommended contact times) must be as per the manufacturer's instructions and/or Material Safety Data Sheet
- Any cleaning solutions repeatedly applied from a bucket should be disposed as clinical waste either at the end of cleaning of each room or when contamination of the solution is suspected

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<sup>3</sup> In this document, strong sodium hypochlorite solutions are those containing 5000–10 000 ppm available chlorine (0.5–1%), depending on the starting product; weak solutions contain 500–1000 ppm (0.05–0.1%). Refer to the South Australian factsheet for healthcare professionals – Guide to dilution for chlorine-based disinfectant solutions [[www.sahealth.sa.gov.au/wps/wcm/connect/d3396d00411006b8875bcf8f6fad9ea1/FactSheet-dilutions-sodium-hypochlorite\\_V2+2-phcs-ics-20140917.pdf?MOD=AJPERES&CACHEID=d3396d00411006b8875bcf8f6fad9ea1](http://www.sahealth.sa.gov.au/wps/wcm/connect/d3396d00411006b8875bcf8f6fad9ea1/FactSheet-dilutions-sodium-hypochlorite_V2+2-phcs-ics-20140917.pdf?MOD=AJPERES&CACHEID=d3396d00411006b8875bcf8f6fad9ea1) ]

<sup>4</sup> Infectious waste to be packaged for transport as a Category A waste under relevant state or territory requirements

- All used cleaning solutions should be disposed of as clinical waste
- All PPE, cleaning cloths and mops should be disposed of as infectious waste
- During cleaning, household members should not be present

If a PPE breach occurs during cleaning, procedures for blood and body fluid exposures should be followed.