“Wipe with a damp cloth. Do not use bleach”

A review of decontamination instructions for shared equipment used in a pre-hospital setting.

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Background

Reusable equipment used in healthcare has the potential to harbour a number of potential pathogens, including multi-resistant organisms. Certain microorganisms can survive on dry surfaces for prolonged periods of time if not cleaned correctly, increasing the risk of patient and staff acquisition of healthcare associated infections[1].

While the importance of reprocessing shared equipment is well documented for hospital settings, there is little research for cleaning and disinfecting requirements for equipment used by ambulance services.

Pre-Hospital Challenges

- Unpredictable and challenging environments
- High risk of exposure to blood and bodily fluids
- High risk of exposure to communicable infections
- Frequent contact with multiple healthcare facilities[2]

Contamination of equipment

Pathogen Survival Times on Dry Surfaces[3]	
Organism	Survival Time
Clostridium difficile (spores)	5 months
Acinetobacter spp	3 days to 5 months
Vancomycin-resistant enterococci (VRE)	5 days to 4 years
Pseudomonas aeruginosa	6 hours to 16 months
Klebsiella spp	2 hours to > 30 months
Methicillin-resistant *Staphylococcus aureus* (MRSA)	7 days to 7 months
Norovirus	8 hours to > 2 weeks
Severe acute respiratory syndrome Coronavirus (SARS-CoV)	72 hours to > 28 days
Influenza	Hours to several days

Methods

A complete review of the cleaning and disinfecting instructions for reusable equipment carried in an ambulance, asking the following:

1. Is there a decontamination section in the Instructions For Use (IFU)?
2. When was the date of the IFU?
3. Are the manufacturer’s recommended cleaning and disinfecting products readily available in Australia?
4. Is sodium hypochlorite compatibility specified?

Conclusion

- Insufficient or impractical cleaning and disinfecting instructions
- Out of date cleaning and disinfecting instructions
- Difficulty in cleaning and disinfection of non-wipeable surfaces
- Risk of damage to equipment if non-compatible products are used
- Risk to patient & staff safety from poorly decontaminated equipment

Comprehensive decontamination instructions with clear product capabilities are required to reduce the risk of pathogen exposure in ambulances

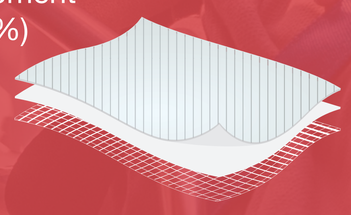
Results

5/30

IFUs specified compatible cleaning products readily available in Australia

COMMON INSTRUCTIONS
- Wipe down with damp cloth
- Mild household cleaners only

30 items of reusable equipment were identified, 12/30 (40%) have parts made from non-wipeable surfaces
(fabrics, webbing, velcro)



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IFUs directly stated sodium hypochlorite must not be used on equipment

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IFUs did not specify sodium hypochlorite compatibility

The majority of IFUs contained a section on cleaning and disinfection, however all of the IFUs were older than

4+ years

with no dates stated on 4 of the IFUs

Solutions

- **Collaboration**
  IPC specialists and manufacturers of cleaning and disinfecting products involved in the design of equipment used by ambulance services
- **Material Suitability**
  Use of wipeable materials which are robust enough to tolerate frequent decontamination
- **Material Compatibility**
  Clear instructions for compatible and non-compatible cleaning and disinfecting products that are available in Australia
- **Alternatives to Sodium Hypochlorite**
  Products that have specific claims against bacterial spores
- **Updated Decontamination Instructions**
  Regular review of cleaning and disinfecting instructions aligned with IPC best practice
- **Embed IPC in Ambulance Services**
  Commitment and investment by Ambulance Services into IPC practices

References

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