

Ultrasound Transducer and Equipment Cleaning and Disinfection

Authors: FUSIC Committee on behalf of the Intensive Care Society and endorsed by the FAMUS working group on behalf of the Society for Acute Medicine

INTRODUCTION

Point of care ultrasound (POCUS) is an important tool in the management of the acutely unwell patient (1). The potential for transmission of infection via ultrasound machines has been recognised, mandating hygienic practice while performing scans (2). This document provides recommendations for individual FUSIC and FAMUS Practitioners and departments for minimising the risks associated with POCUS.

The vast majority of POCUS diagnostic imaging involves surface imaging only with no bodily fluid contact, and thus are considered low level risk (2).

RECOMMENDATIONS (normal infection risk)

1. Equipment should be appropriate for POCUS use, as outlined in the Guidelines for Provision of Intensive Care Services (3) and/or according to local guidance.
2. Individual practitioners should perform hand hygiene before and after performing POCUS, as per local policy.
3. Before scanning, the machine should be inspected for any obvious external contamination. If present, cleaning should occur.
4. If a gel bottle is used, it is strongly recommended to avoid touching the probe surface with the gel bottle tip. Gel bottles should be cleaned before and after each use. Single use gel sachets (e.g Optilube™) are recommended where available.
5. After scanning, excess gel should be removed, and the machine decontaminated with a hospital grade cleaning agent or wipes prior to storage. For surface level imaging, decontamination of the probe, keyboard and screen is recommended as a minimum.
6. For invasive/semi-invasive procedures (Vascular access, fluid drainage, endocavitary probe insertion) probes should undergo high level decontamination as per local guidelines for such equipment. The use of a probe cover is strongly recommended for such procedures.
7. Post invasive/semi-invasive procedures, decontamination of the entire machine is recommended.
8. Refer to the equipment manufacturer's instructions in order to avoid using cleaning products that will damage the machine or probes. (4,5,6) Cleaning agents recognised to be safe are Tuffie5™ Universal Sanitising Wipes (Vernacare, UK) and Clinell™ Universal Wipes (Gama Healthcare, UK)
9. Ensure probes and wires are thoroughly wiped down with the appropriate agents immediately after use and prior to returning them to the holder on the machine.
10. It is recommended that a cleaning register should be kept for each machine, and each use and clean logged. This is especially important in severe infections (see appendix).

RECOMMENDATIONS FOR SEVERE CONTAGIOUS INFECTIONS (eg COVID19, SARS, EBOLA)

1. Scans should be performed only when deemed necessary. The team should ask "Will this change management?"
2. PPE should be worn as appropriate according to national guidance.
3. Where possible, a dedicated ultrasound probe should be assigned to the specific area where these patients are cohorted.
4. High level disinfection should be performed with a hospital grade cleaning agent with recognised antiviral activity, such as Tuffie5™ Wipes, Clinell™ Wipes, or Tristel™ Sporidical wipes (Tristel, UK)
5. The whole machine should be wiped down completely before returning to circulation.

REFERENCES:

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3. Miller A, Peck M, Fletcher N. Chapter 47: Echocardiography and Ultrasound. Guidelines for provision of intensive care services (from the Faculty of Intensive Care Medicine and the Intensive Care Society) 2019. <https://ficm.ac.uk/sites/default/files/gpics-v2.pdf> (last accessed March 15 2020)
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