Good practice in Ultrasound probe cleaning

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Jointly organized by the International Society of Radiology (ISR), the Global Diagnostic Imaging, Healthcare ICT, and Radiation Therapy Trade Association (DITTA) and the World Federation for Ultrasound in Medicine and Biology (WFUMB)
The ISR is a federation of the world’s national radiological societies.

The ISR as a representative Non-governmental Organization (NGO) in official relations with the WHO and represents the national societies at the WHO and the International Atomic Energy Agency.

The mission of the ISR is to facilitate the global endeavors of the ISR’s member organizations to improve patient care and population health through medical imaging.
World wide ISR societies
- Ultrasound (US) is generally considered one of the safest diagnostic modalities available.
- However, in recent years, several outbreaks of infection related to endoscopic procedures or trans-oesophageal US have been reported resulting in the introduction of more stringent infection prevention measures.
- Semi-Invasive
  Transoesophageal echocardiography
  Transvaginal
  Transrectal
- Non-invasive probes used on broken skin
  Vascular access
  Cannulation
  Wound assessment

NHSScotland, 2016
An online survey was sent to all full ESR members in Europe (22,000) in September 2015, with a total of 22 questions.

A total of 1088 replies (4.94%) were received, of which 946 (4.3%) were complete and subsequently analysed.
- Transmission of infection through ultrasound procedures is possible.
- There is a wide range of ultrasound probe decontamination practices in Europe.
- Not all practitioners use probe covers for endo-cavity or interventional ultrasound.
- Not all practitioners use sterile gel for internal and invasive procedures.
- Most practitioners used either refill US gel bottles (520, 55%) or single-use bottles (405, 43%).
- Only 2% used sterile sachets.
Use of US probe covers at all times

<table>
<thead>
<tr>
<th>Procedure</th>
<th>YES (%)</th>
<th>NO (%)</th>
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<tbody>
<tr>
<td>Endo-cavity ultrasound</td>
<td>89%</td>
<td>11%</td>
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<tr>
<td>Interventional procedures</td>
<td>77%</td>
<td>23%</td>
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Current Guidelines

- Canada
- Australia
- US CDC
- NHSScotland
- WFUMB
The use of sterile probe covers is strongly recommended.
- The use of sterile gel in interventional US and Endo-cavitary US is also strongly recommended.
- Wiping probes with a dry towel resulted in persistent contamination.
- Subsequent transducer decontamination after every patient is needed.
- Ultraviolet light
- Hydrogen peroxide
- Manual multi-wipes
- Endoscope washer disinfectors (EWD) can be modified to accommodate TOE probes.
- Individual manufacturers should provide detailed information on which disinfectants are compatible.

- Tracking and traceability of probes through the decontamination process to the patient should be in place.
NHSScotland, 2016
RECOMMENDATIONS

- Increase professional awareness on US probe cleaning.
- Develop and use local guidelines.
- Implementation, monitoring and training policy.
- Traceability of the practices.
- Integration of equipment purchase with the cleaning technology.