

## Appendix B: Infection prevention and control measures

### Infection prevention and control measures when performing lung ultrasound on patients with suspected or confirmed COVID-19<sup>1</sup>

#### Equipment (ultrasound machine, probe)

- Clean and disinfect the entire ultrasound machine, particularly the keyboard, screen and the whole probe with an approved low- or intermediate-level instrument-grade disinfectant.
- Cleaning process: remove all debris such as ultrasound gel with paper/cloth, wash with detergent and water, then rinse and dry thoroughly or use a detergent impregnated wipe approved for use on medical devices.
- A dedicated ultrasound machine for scanning COVID-19 patients should be allocated where possible.
- Handheld ultrasound devices should preferentially be used, as they can be completely encased with a probe cover, can be easily cleaned, and do not have a cooling fan.
- If a handheld device is not available, cart-based ultrasound machines should be stripped of all unnecessary items, like printers, baskets, and gel bottles.
- Machines with touch screens are preferable to machines with keyboards or buttons.
- Employ single-use gel packets instead of gel bottles.
- Clean and disinfect computer workstations and desks used by the ultrasound practitioner for reporting.

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<sup>1</sup> World Health Organization, 2020. Use of chest imaging in COVID-19.  
<https://www.who.int/publications/i/item/use-of-chest-imaging-in-covid-19>

**Ultrasound practitioners**

- Ultrasound practitioners with specific health problems that place them at greater risk (as detailed by local occupational health guidelines) are to be excluded from performing ultrasound
- Personnel protective equipment such as gloves; masks, protective eyewear, gowns should be worn upon entry into the patient room. Disposable wear should be discarded after use. Reusable wear should be cleaned and disinfected according to manufacturer's guidelines.
- Additional training on PPE for healthcare workers is advised and should include donning and doffing guidance.
- The practitioners should not wear jewelry, arms should be uncovered below elbow
- All ultrasound practitioners should perform hand hygiene before and after all patient contact, contact with potentially infectious material (e.g. bed linen and patient gowns), and before and after removing personal protective equipment (PPE) including gloves.
- Hand hygiene should be performed using an alcohol-based hand rub or washing hands with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water.
- Personnel who come into contact with COVID-19-positive or COVID-19-suspected patients, especially those working in high-risk environments (e.g. ICU/emergency departments) should don a uniform or scrubs that are not taken home for laundering.
- Ultrasound practitioners should routinely wear closed-toe shoes constructed in a material that can be easily cleaned, and these should be wiped regularly and immediately after coming into contact with a COVID-19-positive patient.

**Patients**

- It is advisable that confirmed COVID-19- positive patients wear a surgical mask at all times.
- If there is no dedicated system for COVID-19- confirmed patients, it would be preferable to scan at the end of the clinic list so that the equipment undergoes vigorous cleaning and disinfection.
- During the pandemic, it is reasonable not to allow trainees or students to participate.
- Accompanying persons should be limited at the point of procedure unless warranted for the purpose of the examination, for example pediatrics or patients requiring extra care.